# HOLDEN SUNBIRD

Important operating safety and maintenance instructions

HOLDEN GMH

# OWNER MANUAL

# A WORD TO SUNBIRD OWNERS...

This manual has been prepared to acquaint you with the operation and maintenance of your vehicle, and to provide important safety information. We urge you to read this publication carefully and follow its recommendations to help assure enjoyable and trouble-free operation of your veihcle. When it comes to servicing remember that a GMH Dealer has the trained personnel, the specialized equipment and the interest to assist you with service needs.
Return to a GMH Dealer for Guardian Maintenance Service and any other assistance you may require.

To assist Dealers in handling your needs, General Motors-Holden's maintains Zone Offices in each mainland State capital. Should you have a problem that cannot be handled through normal channels, follow the procedure presented in this manual under the heading, "Owner Relations".
We would like to take this opportunity to thank you for choosing a General Motors-Holden's product — and assure you of our continuing interest in your vehicle's operation and your satisfaction.

GENERAL MOTORS-HOLDEN'S

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Printed in Australia by The Dominion Press, North Blackburn 3130.

# SUNBIRD OWNER MANUAL

This Manual should be considered a permanent part of the vehicle and must remain with the vehicle at the time of resale.

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General Motors-Holden's sell their products in many countries. However, in the event that it is intended to take the vehicle outside the area or country where it was purchased, it is advisable to check with a Zone Office of General Motors-Holden's to ascertain whether maintenance service and spare parts will be available in the areas where it is contemplated travelling.

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As the policy of General Motors-Holden's is one of continual product improvement, all specifications and equipment are subject to change without notice.

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A HOLDEN Publication.

Part No. 92007049

July, 1978

ISBN 0 909989 98 2

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# RUNNING IN

## YOUR VEHICLES INITIAL PERIOD OF OPERATING

You can operate your new vehicle from the beginnlng without adhering to a formal break-in schedule. However, during the first few hundred kilometres of driving you can, by observing a few simple precautions, add to the future performance and economy of your vehicle.

We recommend that during the first 500 km you hold your vehicle speeds to no more than 80 km/h. After thls initial perlod, speeds may be increased gradually but up to 1500 km avoid driving for extended periods at any one speed, elther slow or fast. Varying the speed to lnclude some higher speeds within the limits of the law, wlll promote longer life of parts and better economy of oil and fuel. Never subject your vehicle to full throttle acceleration or high speed until the engine is thoroughly warm and after the first 3000 km have been covered.

It is also recommended that for the first 500 km heavy braking should be avoided, except in the case of emergency, since brake misuse during this period could impair future braking efficiency.

If you plan to use your new vehicle for trailer (caravan) hauling see additional information on Page 14.

**REFER PAGE 73 FOR ADDITIONAL INFORMATION ON**

**HOW TO IMPROVE YOUR FUEL ECONOMY**

# SAFE DRIVING HINTS & RECOMMENDATIONS

## IMPORTANT

These items are listed as a safety reminder to you the owner. The appropriate section of this manual should be referred to for a more detailed explanation.

## CARBON MONOXIDE

Avoid inhaling exhaust gases because they contain carbon monoxide, which is colourless and odourless. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal. (Refer to page 17.)

## SEAT BELTS

Various road laws require the wearing of seat belts. It is important that the habit of using these should be developed by yourself and others using the vehicle. (Refer to page 10.)

In the interest of safety seat belts should be checked regularly. Your Dealer will inspect and check the belts for you as part of the normal Guardian Maintenance Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belts and reduce their effectiveness, in preventing injury, in an accident.

## ANTI-THEFT IGNITION STEERING LOCK

DO NOT turn the ignition switch away from the ON position while the vehicle is in motion as this renders ineffective any power assisted equipment fitted to your vehicle.

Never select the LOCK position while the vehicle is in motion as this will lock the steering of the vehicle and render it inoperative. (Refer to page 18.)

## LOOSE ARTICLES

Do not leave a loose load or articles inside the vehicle. Stow articles in the luggage compartment and tie down if necessary. (Refer to page 5.)

## BRAKE OPERATION

Driving through water may affect brake performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal. Brake pedal travel should not be obstructed by improper floor mats or other interfering material under the pedal. (Refer to page 26.)

## POWER ASSISTED BRAKE

Do not let the vehicle run down steep grades without the engine running.

Do not coast with the engine switched off. (Refer to page 27.)

## TYRE TRACTION

A decrease in driving, cornering, and braking traction occurs when water, snow, ice, gravel, or other similar materials are on the road surface. Driving practices and vehicle speed should be adjusted to the road conditions. (Refer to page 69.)

## COOLING SYSTEM

If the cooling system is hot, the radiator cap must not be removed quickly — it should be rotated slowly to the first stop, which permits the pressure to release slowly through the overflow pipe. (Refer to page 62.)

## PETROL FUMES

Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refuelling. If petrol fumes are noticed while driving, the cause should be determined and corrected without delay. (Refer to page 90.)

# SAFETY FEATURES

## INCLUDE—

Lane Changer.

Seat Belts for all Occupants.

Energy Absorbing Steering Column and Steering Wheel.

Anti-Theft Combined Steering/Ignition Lock.

Tandem Brake Cylinder — Dual Hydraulic Circuits.

Spring Loaded Knock-Out Type Internal Rear Vision Mirror Mounting and Shatter-Resistant Mirror.

External Rear Vision Mirror which is Glare Reduced.

Toughened Windshield with Modified Zone.

Safety Glass Windows.

Glare Reduced — Safety Padded Instrument Panel.

Recessed Instruments and Instrument Panel Controls.

Glare Reduced Instruments and Controls.

Low Profile Window Regulator Handles.

Sun Visors — Energy Absorbing.

Flush Fitting Lift-Up Exterior Door Handles.

Safety Door Locks — Exterior and Interior Door Handles Free-Wheel.

2-Jet Electric Windshield Washer.

2-Speed Windshield Wipers with Glare Reduced Arms and Blades.

Cigarette Lighter Operates on Ignition or Accessory Positions only.

Back-Up Lamps.

Wrap Around Turn-Signal/Back-Up Lamps.

Front Parking Lamps Incorporated in Headlamps.

Fusible Link in Wiring Harness.

Fan Assisted Heater/Demister.

Brake Failure and Parking Brake Warning Light.

Safety Flanges on Both Rims of Road Wheels.

Front Seat Head Restraints.

Contoured Skid Header Panel Above Windshield.

Flow Through Ventilation.

Underslung Fuel Tank & External Fuel Lines.

Floor Mounted Hand Brake.

# SECTION – 1 BEFORE DRIVING YOUR NEW VEHICLE

## SAFETY ASPECTS

### BEFORE ENTERING THE VEHICLE

1. See that windows, mirrors and lights are clean.
2. Visually note inflation condition of tyres.
3. Check that area to rear is clear if about to back-up.

### BEFORE DRIVING AWAY

1. Be sure you understand your vehicle and how to operate it safely.
2. Be sure all doors are secured and locked.
3. Position seat by adjusting as required.
4. Adjust inside and outside rear vision mirrors if necessary.
5. Fasten seat belts (refer Page 11 for Adjustment Procedure).
6. Check that the warning indicators glow when key is turned to the ON position.
7. Release the parking brake.

### HIGHWAY SAFETY DEPENDS ON

1. YOU, THE DRIVER
2. THE CONDITION OF YOUR VEHICLE
3. THE TRAFFIC AND HIGHWAY CONDITIONS

**. . . BE SURE YOU UNDERSTAND ALL THREE!**

**CAUTION: Do not leave a loose load or articles inside the vehicle. Stow articles in the luggage compartment and tie down if necessary.**

**The above action helps prevent loose items from becoming dangerous projectiles in the event of a sudden stop or collision.**

**REMINDER:** Proper Operation, Periodic Maintenance and Safety Inspections Help Provide

- Economical operation of your vehicle
- Safety for you and your passengers
- Dependable transportation

The following 10 items need regular and conscientious attention in the interest of safety.

If they require rectification an Authorised GMH Dealer will assist you.

BRAKES
ALL LAMPS
SEAT BELTS
STEERING AND WHEEL ALIGNMENT
TYRES — CONDITION & PRESSURES
EXHAUST SYSTEM
GLASS AREAS
WINDSHIELD WIPERS AND WASHERS
REAR VISION MIRRORS
HORN

**SAFETY MEANS REGULAR INSPECTIONS**

# KEYS AND LOCKS

## KEYS

Your vehicle is fitted with a two key locking system which provides a security facility for personal valuables when parking in car parks or similar areas where locking of the vehicle is not permitted.

The Master key (plastic head) is retained and used by the driver at all times and operates all locks on the vehicle.

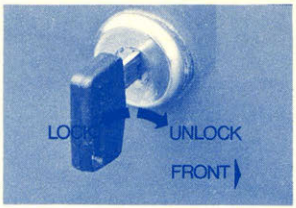
The Service key (square head) is left with the vehicle when it is parked in those areas described above and only operates the door locks and ignition switch which enables the vehicle to be moved if required but does not allow entry to the instrument panel or luggage compartments.

The key code number is stamped on the key shaft.

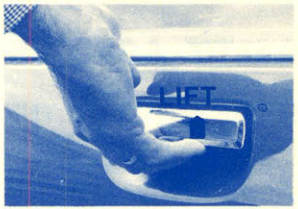
Before placing the key on your key ring, record the code number and place it in a safe place so that if the key is lost duplicates can be ordered from any GMH Dealer by quoting the key code number.

**NOTE:** During cold weather, moisture may freeze in the door locks. In that case, heat the key with a match or pocket lighter and insert it several times in the cylinder until the lock is free.

## DOOR LOCK OPERATION



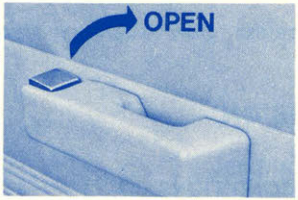

**Exterior Lock**



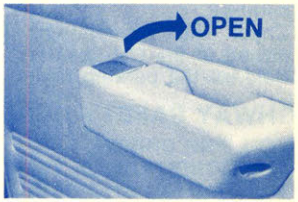

**Exterior Handle**

### OPENING WITH KEY

Both front doors can be unlocked with the key from the outside by turning the top of the key towards the front of the vehicle, before lifting the finger bar to open the door.




**Interior Handle Front Door**




**Interior Handle Rear Door**

### OPENING WITH HANDLE

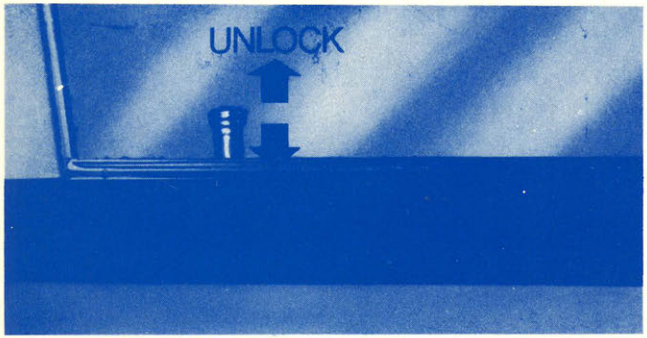
All doors are fitted with safety flush fitting handles with a vertical lift to actuate the door locking mechanism, which will "free wheel" if the internal locking button is still depressed.

### LOCKING FROM THE INSIDE

In the interest of safety, all doors incorporate a free wheeling lock mechanism, prohibiting the doors being opened from the outside or inside unless the locking button is first raised.

### LOCKING FROM THE OUTSIDE

All doors can be locked from the outside by pressing down the inside locking button while the door is open, then shutting the door.




**Locking Button**

## COMPARTMENT LOCK OPERATION

### INSTRUMENT PANEL COMPARTMENT LOCK

To lock insert the key, rotate anti-clockwise one quarter of a turn and then withdraw.

To unlock insert the key and rotate clockwise one quarter of a turn. The key should then be withdrawn before turning the lock clockwise to allow the door to open downwards.

### LUGGAGE COMPARTMENT LOCK

Insert the key and rotate clockwise to unlock. The lid will spring open a small distance, thus allowing the operator to lift the lid to its fullest extent for the stowing of luggage.
To shut, simply lower the lid to a position a small distance above the closed position, then quickly and firmly push downwards to engage the lock.
Ensure that no articles are stowed directly in the path of the closing lid, to prevent damage to either the lid or the articles or both. This is especially important with articles stowed beneath the glass area of the hatchback lid.

**REMINDER:** Do not leave the key inside the luggage compartment or in the lock.

## FUEL FILLER LOCKING CAP

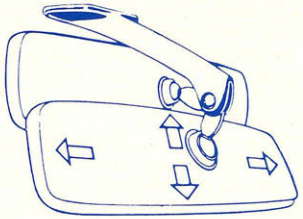
Where a locking type fuel filler cap is fitted, two keys are provided, one being a spare.

# REAR VISION MIRRORS

## INTERNAL REAR VISION MIRROR

The internal rear vision mirror is shatter-resistant and is mounted in the safety type 'skid' windshield header panel. The design incorporates a spring loaded attachment which can allow the mirror and its mounting to be knocked out as a result of accidental impact, thus lowering the chance of injury.

At the lower end of the mounting arm there is a pivoted arm with a ball end which enables the mirror to be raised or lowered to prevent obscuring forward vision while still maintaining the same angle setting.



## ANTI-GLARE MIRROR

Where the prismatic type anti-glare mirror is fitted, a control lever on the lower edge of the mirror enables an anti-glare reflector to be used during night driving, thus reducing headlamp glare from following vehicles.

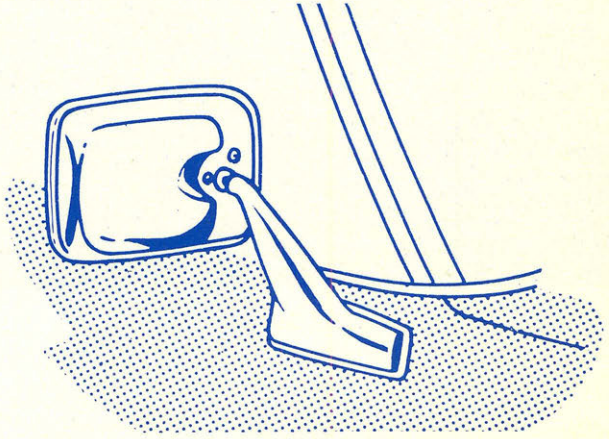
During normal daylight operation, the lever should be set forward.

During night time operation, in order to reduce the glare of the headlamps from following vehicles, move the lever rearward.

## EXTERNAL REAR VISION MIRROR

Mounted on the outside of the driver's front door, is a glare-reduced mirror that can be adjusted by means of a ball type swivel joint, thus providing the driver with a means to assist in observing traffic which may be about to pass or is in the adjacent traffic lane. The mirror is so designed that, should the driver inadvertently steer his vehicle too close to an obstruction or pedestrian, the mirror can deflect out of harm's way. Adjustment of this mirror should be correct only when the driver's head is in the normal driving position, otherwise the purpose of the mirror is negated.

Where a passenger's side external mirror is fitted care should be taken to correctly adjust the mirror for use by the driver.



# FRONT SEAT ADJUSTMENT

## BUCKET SEAT

### FRONT-REAR CONTROL

Each bucket seat has a forward and rearward adjustment control. The front-rear control lever is located to the right of centre at the lower front of the seat. Move the lever **across to the right** to unlock the adjustment catch.

Try to move the seat back and forth after adjusting to check that the catch is fully engaged.

### RECLINING BACK CONTROL

The reclining mechanism is controlled by a large toothed wheel on the outer side of the seat, located at the bottom of the seat back.

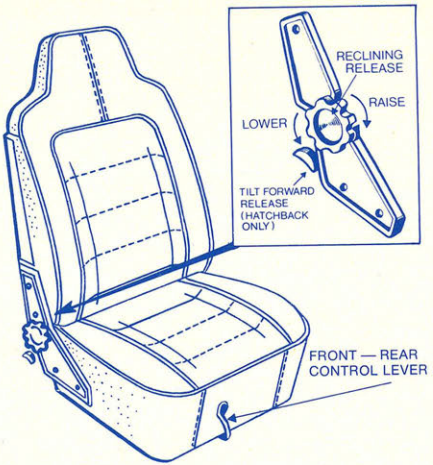
By turning the wheel, the reclining position of the seat can be changed through a large angle, as desired.

The seat back will move in the same direction as the top of the wheel.

**Hatchback Models:** To release the seat back and enable it to come forward for rear seat passengers to enter or exit the vehicle, a release catch lever is located below the adjusting wheel; the lever should be moved upwards to release the catch.

After the seat back is moved back, it will re-engage the catch mechanisms at the same angle as the original position.

**CAUTION: To avoid reducing the effectiveness of seat belts it is recommended that reclining seats be used in no more than a semi-reclined position when the vehicle is in motion. The fully reclined position should only be used when the vehicle is stationary.**




## HEAD-RESTRAINT

This safety feature is not intended to be used as a headrest. It is solely for the reduction of possible injury that may result from a 'whip-lash' neck movement following a vehicle collision.

## FRONT SEAT REPOSITIONING

Certain people, due to their lack of height, may consider it advisable to have the front seat repositioned. It is possible to have the seat moved forward 2.5 cms on the seat mountings, giving decreased leg room. It is suggested that should the necessity arise, this matter be discussed with a GMH Dealer.

# SEAT BELTS

## GENERAL NOTES

Australian Design Rules require Seat Belts to be fitted as standard equipment; therefore, this section should be carefully studied.

In the interest of safety seat belts should be checked regularly. Your Dealer will inspect and check the belts for you as part of the normal Guardian Maintenance Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belts and reduce their effectiveness, in preventing injury, in an accident.

**WARNING: Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis, or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.**

**Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.**

**Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged.**

**It is essential to replace the entire assembly after it has been worn in a severe impact even if damage to the assembly is not obvious.**

**Belts should not be worn with straps twisted.**

**Each seat belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.**

## RELEASING BELTS

To release all belts simply depress the release button located in the centre of the buckle.

## CARE OF SEAT BELTS

Keep the belts clean and dry. Clean with a mild soap solution and lukewarm water. Keep sharp edges and damaging objects away from the belts.

Periodically, inspect the belts, buckles and anchorage points. Damage or fraying that could lessen the effectiveness of the system should be eliminated by replacing the belt assemblies. Do not bleach or dye the belts since this can cause severe loss of strength as also will contamination of the webbing with polishes, oils or chemicals — particularly battery acid.

## USING SEAT BELTS

Various road laws require the wearing of seat belts. It is important that the habit of using these belts should be developed by yourself and others using the vehicle.

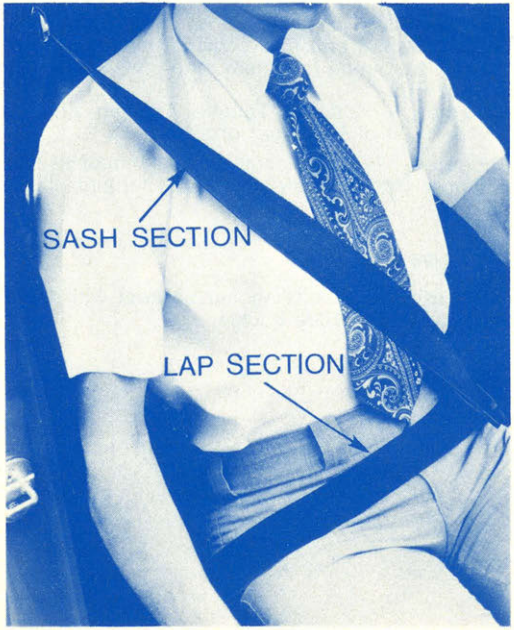
The adjustment and operating instructions are detailed in this Section together with the Seat Adjustment it being important that both positions be comfortable in order that the driver may devote his entire attention to the job of driving and observing the road.

**IMPORTANT:** Don't use belts that are twisted — untwist them before making any adjustments and be sure that they contour around the body comfortably when adjustments are complete.

(Refer to the following pages for important instructions).

# LAP/SASH COMBINATION BELT

A firm, low position across the pelvis by the lap section of the Lap/Sash Combination Belt is essential in order that the force exerted by the Lap Belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.




## EMERGENCY LOCKING RETRACTOR TYPE

This type of seat belt allows the wearer to move bodily while the seat belt is fastened. It is also dual sensitive.

The first way the locking mechanism is activated is by sudden changes of vehicle speed or vehicle direction, as in the case of firm brake application or vehicle impact during an accident. This phase of the retractor mechanism's operation can be tested by allowing the body to be restrained only by the belt during firm application of the vehicle brakes, at between 2-5 km/h (brisk walking speed) under safe conditions. The belt should lock immediately, stopping all belt movement.

The second way the locking mechanism is activated is by a sudden extension of the belt from the retractor housing. This phase of the retractor mechanism's operation can be tested by holding the belt tightly and giving it a sudden firm jerk. The retractor mechanism should lock immediately, stopping all belt movement.

These checks should be carried out regularly.

**WARNING: No modifications or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.**

**TONGUE RESTRICTOR**

This belt system incorporates a tongue restrictor which can be moved along the belt to locate and hold the tongue in any desired position.

**WARNING: The positioning of the tongue restrictor must never interfere with or stop the belt from fully retracting.**

**BELT ADJUSTMENT**

1. Adopt a satisfactory seating position.
2. Bring the metal tongue across the body and snap home the Tongue into the Buckle.
3. After fastening, settle the belt by running a hand under the belt, starting at the outer hip area, then across to the tongue and up the sash section. This will feed back unwanted belt length to the retractor.
4. Finally check the fit and adjustment.

## NON-RETRACTOR TYPE

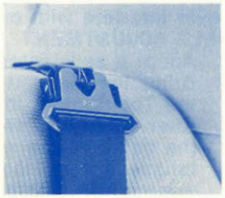
### BELT ADJUSTMENT

1. Adopt a satisfactory seating position.
2. Bring the metal Tongue across the body and snap home the Tongue into the Buckle.
3. Adjust the belt to obtain a firm fit. A firm, low position across the pelvis by the lap section of the Lap/Sash Combination Belt is essential in order that the force exerted by the Lap Belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.
   To Lengthen — Tilt the belt adjuster and then pull the belt at a point below the finger grip bar.
   To Shorten — Tilt the belt adjuster and use the serrated Finger Grip Bar to pull the belt through the belt adjuster.

4. Finally check the fit and adjustment.

### BELT STOWAGE

Stowage of the outer section of the belt, is provided by a hook located on the belt adjuster. These hooks should be used when the belts are not in use to keep them away from door openings.



## LAP TYPE BELTS

### BELT ADJUSTMENT

1. Adopt a satisfactory seating position.
2. Bring the Tongue Adjuster across the body and snap home the Tongue into the Buckle.
3. Adjust the belt to obtain a firm fit. A firm low position across the pelvis is essential in order that the force exerted by the lap belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.
   To Lengthen — Tilt the Tongue Adjuster and pull the belt to the right of the finger grip bar.
   To Shorten — Tilt the Tongue Adjuster and use the serrated Finger Grip Bar to pull the belt through the Tongue Adjuster.

### BELT STOWAGE

When not in use these belts should be kept with the tongue latched into the appropriate buckle.

# INFANT AND CHILD RESTRAINTS

**CAUTION: Children in automobiles should be restrained to reduce the risk of injury in accidents, sudden stops or other hazardous situations.**

General Motors-Holden's Dealers can advise you about restraint systems designed specifically for use with infants and small children.

**WARNING:** Child restraint anchorges are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts or harnesses.

Anchorage points for child restraint systems will be provided behind the rear seat of sedan and hatchback coupe models manufactured by General Motors-Holden's Ltd., after June 30th, 1976. The locations of the anchorage points are shown below.

**WARNING:** On Hatchback coupe model a child restraint anchorage is **NOT** provided for the centre rear seating position.

In accordance with the Australian Design Rules it is recommended that infant and child restrain systems are **NOT** fitted in the centre position of the rear seat, because it has a hinged split back, and the upper strap of the restraint in this position can fall between the sections of the back seat during a firm brake application or vehicle collision, thus affecting the performance of the restraint system.

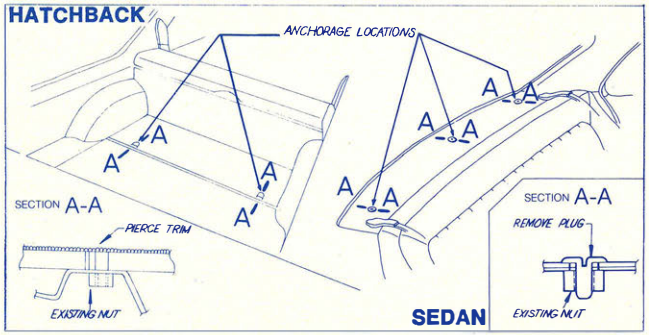
In using any infant or child restraint system, read and comply with all installation and usage instructions. All unused seat belts should be stowed properly to help prevent them causing injury in the event of an accident.

If a child is travelling in a vehicle not equipped with an approved infant or child restraint or an alternative restraint system, the following precautions should be taken.

1. Infants unable to sit up by themselves should be restrained by placing them in a covered, padded bassinet which is placed crossways in the vehicle (widthwise) on the rear seat. The bassinet should be securely restrained with the regular vehicle seat belts.

2. Children able to sit up by themselves should be placed on a seat and restrained with a seat belt. If the sash section of the belt causes neck or face irritation due to the child's size, this may be reduced in some cases by positioning the child further towards the centre of the vehicle. If serious discomfort continues, the child should be lap belted in the rear seat. Never allow a child to stand or kneel on any seat.

3. General Motors-Holden's recommends that children be restrained properly when riding. However if unusual conditions prohibit the use of restraints and require that a child must stand, use the floor directly behind the front seat. This will help minimize the possibility of injury from frontal impacts in the event of an accident.



# TRAILER (CARAVAN) HAULING

Since passenger vehicles are designed and intended to be used primarily as a passenger conveyance, towing a trailer could affect handling, durability and economy. Maximum safety and satisfaction depend upon the proper use of correct equipment and avoiding overloading and other abusive operations such as that which can occur in rough or hilly terrain.

The maximum loaded trailer weight which you can pull with your vehicle depends on the special equipment that has been installed and the load limits that apply to the model. **(Do not exceed the ratings on Page 15.)**

## TONGUE LOAD

To assist in maintaining good handling of a vehicle-trailer combination, it is important that the vertical load at the trailer attachment coupling be approximately 10% of the loaded trailer weight. This weight distribution can be checked by weighing the loaded trailer first, then checking the load at the attachment coupling, before coupling the trailer to the tongue on the vehicle.

## TYRES

When towing a trailer the vehicle's tyres should be inflated to the highest recommended inflation pressures. The rear axle load has to be reduced by an amount equal to the tongue load on the vehicle (i.e. the 10% of the trailer weight) if an equalizing load levelling hitch is not fitted. However, where the latter type of trailer attachment is fitted, it is not necessary to reduce the vehicle's load due to the effect of the attachment's operation, provided the maximum rear axle loading and maximum loaded vehicle weights are not exceeded (refer page **71 Vehicle Weight Chart).**

## MAINTENANCE — AUTOMATIC TRANSMISSION

More frequent vehicle maintenance is required when using your vehicle to pull a trailer. Where an automatic transmission is fitted the transmission fluid will need to be changed every 12 months or 20,000 kilometres. (Refer Section 5 also.)

## RUNNING IN PERIOD

It is recommended that your new vehicle be operated for 1500 kilometres before trailer towing. If it is necessary to tow during this period, avoid speeds over 80 km/h and full throttle starts. The same precaution should be observed whenever a new or reconditioned engine, transmission or rear axle has been installed in the vehicle.

## ELECTRICAL CONNECTION

To facilitate connection of the trailer wiring to the vehicle's electrical system, a special wiring harness, which provides protection against overloading the turn signal electrical system, is available through any GMH Dealer or a GM Parts and Accessories stockist. This is the only system recommended by GMH. Use of a non-genuine connection could affect the warranty on the wiring of your vehicle.

**CAUTIONS:**

**(1) Towing a trailer in excess of 900 kg is not recommended.**

**(2) Do not use axle-mounted hitches. They can cause damage to the axle housing, wheel bearings, wheels or tyres.**

**(3) Trailer brakes are required on trailers over 500 kg loaded weight except where State Laws may specify a lower limit.**

**(4) Do NOT tap into the vehicle's hydraulic brake system. Operation of the trailer brake system by tapping into the vehicle's hydraulic brake system would require fluid displacement from the vehicle's master cylinder. THE VEHICLE'S MASTER CYLINDER FLUID CAPACITY WILL NOT BE SUFFICIENT TO OPERATE BOTH BRAKE SYSTEMS UNDER ALL CONDITIONS.**

**(5) CAUTION: WHENEVER A TOW-BAR IS REMOVED BE CERTAIN TO HAVE ANY MOUNTING HOLES IN THE UNDERBODY PROPERLY SEALED TO PREVENT THE POSSIBLE ENTRY OF EXHAUST FUMES, DUST AND WATER.**

## PERMISSIBLE OPERATING LOADS

**Before contemplating the towing of a trailer or caravan it is necessary to check that the correct equipment is fitted to the vehicle to cover both the legal and manufacturer's requirements. Therefore, the matter should be discussed with your local authority or a GMH Dealer.**

| "A". No brakes fitted to trailer.<br>"B". Fitted with independently operated trailer brakes and a standard GM. P & A tow-bar. | — A — | — B — |
|---|---|---|
| Maximum Trailer Weight (Tare Weight plus all load) | 495 kg | 900 kg |
| Nominal Static Weight to be imposed on the vehicle Tow-Bar Tongue by the Trailer (10% of the Trailer Weight) | †49 kg | †90 kg |

**† This weight must be included as part of the load carrying capacity of the vehicle. (Refer Page 71.)**

## DRIVING HINTS WHEN TOWING

**NOTE:** The use of Super-Lift Shock Absorbers should be considered if regular trailer or caravan operation is to take place.

1. Remember that a vehicle's acceleration, braking and ability to negotiate rough and/or winding roads, etc., are all impaired by the extra weight of a caravan or trailer. During summer time the desired performance should be gauged to avoid overheating the engine and transmission. Making a couple of short distance trial runs is a good way of regaining "the feel" of your caravan. This will eliminate surprises when you pull out of your driveway on the first leg of a long journey to a holiday resort.

2. Have your engine tuned up and spark plugs cleaned or replaced before you depart.

3. Equip your vehicle on both sides with the extended arm rear vision mirrors necessary to see behind your caravan adequately.

4. Headlamps should be re-aimed for correct setting after the vehicle has been loaded and the trailer coupled.

5. When descending steep grades, don't continually apply the brakes to maintain safe speeds. Instead, use a lower gear, permitting the engine to provide a portion of the required braking action.

   Automatic Transmissions — (Refer Page 25 for use of **S** or **L** positions).

   Riding the brake pedal heats up the brakes and reduces braking effectiveness.

6. If your trailer runs off the paved highway surface on to the shoulder, resist the temptation to quickly turn the steering wheel to bring the trailer back on the road. Instead, allow the left wheels of the vehicle to also run off on to the shoulder. Then, wait for a good opportunity to steer the vehicle back on to the road. This will prevent an abrupt swerving reaction and will keep you safely in the traffic lane.

7. Keep your windshield clean, which also means keeping a regular check on the level of the windscreen washing solution container. (Refer Page 65 for Windshield Cleaning.)

8. Make sure that the cooling system of your vehicle is adequately filled (refer to Page 62, filling the cooling system) and that the radiator is not covered by insects.

9. Be careful to observe all Road Laws, regarding trailer and caravan towing, e.g. Ensure that

   —a hitching chain is fitted.

   —the ball or tongue does not obscure the number plate on your vehicle when the caravan is not hitched.

   —the number plate on your caravan is visible at all times.

# SECTION – 2 STARTING AND OPERATING

## EXHAUST GAS

### CARBON MONOXIDE WARNING

Avoid inhaling exhaust gases because they contain carbon monoxide, which is colourless and odourless. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal.

The best protection against carbon monoxide entry into the driving compartment is a properly maintained engine exhaust system. If you notice a change in the sound of the exhaust system, if exhaust fumes are smelled or detected in any other way inside the vehicle, or if the exhaust system or rear of the vehicle is damaged the vehicle should be taken to a GMH Dealer for inspection.

Have them inspect the complete exhaust system and underbody area for broken, damaged, missing or incorrectly positioned parts, open seams, holes, or loose connections, or other deterioration which could permit exhaust fumes to seep into the driving compartment. Dust or water in the vehicle may be an indication of a problem in one of these areas.

It is recommended that the vehicle be inspected each time it is raised for lubrication.

If at any time you suspect that exhaust fumes are entering the driving compartment have the cause determined and corrected as soon as possible. Use genuine GM parts recommended for your vehicle for any repairs which may be necessary.

If you must drive under these conditions, drive only with all windows full open.

**CAUTION: Sitting in a parked vehicle with engine running for an extended period is not recommended.**

**Do not run the engine in confined areas such as garages any more than necessary to move the vehicle in or out of the area.**

When the vehicle is stopped in an unconfined area with the engine running for any more than a short period, the following instructions should be observed.

Depending on the equipment fitted:

(i) without heater, fully open the Rotary Vane Outlets.

(ii) with heater, close off the Rotary Vane Outlets then use the fan of the heater unit to pressurize the interior with the distribution lever set at ▲ or ▼ and the fan switch at ‖.

The luggage compartment lid should be closed at all times while driving, to prevent exhaust gases being drawn into the vehicle.

However, if for some reason the luggage compartment has to remain open while travelling, the following precautions should be observed:

1. Close all windows and fully open whatever ventilation system is fitted. (Outlined above.)
2. Do not exceed 50 km/h unless necessary, according to traffic conditions and regulations.

### EXHAUST POLLUTION AND YOUR NEW SUNBIRD

Your new vehicle has been designed and equipped with several engine, carburation components and modifications which are intended to minimize the emissions of harmful exhaust pollutants. Refer to the Emission Control Owner's Handbook supplied with the vehicle. One of the requirements for assurance that your vehicle will continue to operate as designed in regard to exhaust emissions and driveability, is the need for proper vehicle maintenance. Refer to the Owner's Guide for maintenance requirements.

# STEERING COLUMN CONTROLS

## ANTI-THEFT IGNITION STEERING LOCK

The anti-theft lock, located on the right side of the steering column, has five positions:

**ACC** (1st Back) — Permits operation of electrical accessories when the engine is not running. To engage, push the key in and turn toward you (counterclockwise).

**LOCK** (Normal Parking Position) — Locks the ignition when the key is removed and provides an added theft protection by preventing normal operation of the steering wheel.

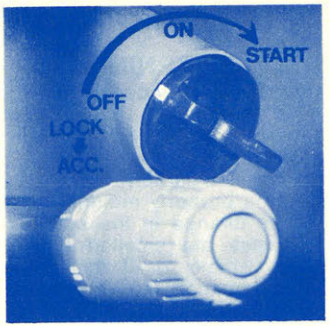
**OFF** (1st Forward) — Permits turning the engine off without locking the steering wheel.

**ON** (2nd Forward) — Normal operating position. The ignition circuit and electrically operated instruments are energised.

**START** (3rd Forward) — Permits engagement of starter.

**CAUTION: Do not turn the ignition switch away from the 'ON' position while the vehicle is in motion as this renders ineffective any power assisted equipment fitted to your vehicle.**

**Never remove the key while the vehicle is in motion as this will lock the steering of the vehicle and render it inoperative.**




**PARKING: When leaving your vehicle unattended:**

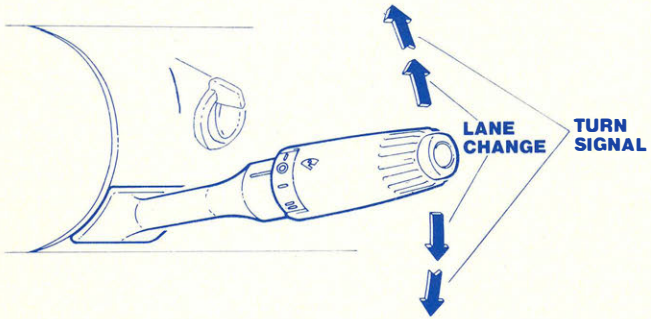
1. Apply the parking brake. (Refer to page 30.)
2. Place the transmission selector in:
   Reverse—Manual Trans.
   Park—Automatic Trans.
3. Turn the key to the LOCK position.
4. Remove the key.
5. Lock all doors and windows.

## HORN

A single low note horn is fitted to all models which can be operated at any time by pressing the insert, situated across the centre of the steering wheel.

## TURN SIGNAL OPERATION

To operate the turn signal (Direction Indicator) lights, the ignition switch should be in the ON position.
When the combination stalk is moved up or down, a tell-tale green light will flash intermittently, indicating in which direction it is intended to turn. As the steering wheel returns to the straight ahead position, the indicator mechanism automatically cancels the signal and the lever returns to its neutral position. Both the front and rear external turn signal lights will flash together according to the direction selected.
Proper functioning of the turn signal lamps is indicated by normal flashing of the green tell-tale lights on the instrument panel as well as by audible clicking signal from the flasher timing unit. If the tell-tale signal should increase appreciably in flashing speed and the clicking signal is not audible or if the tell-tales do not flash when the turn signals are operated, a malfunction exists in the system, which should be attended to immediately in the interest of your safety and other road users.




## LANE CHANGE INDICATION

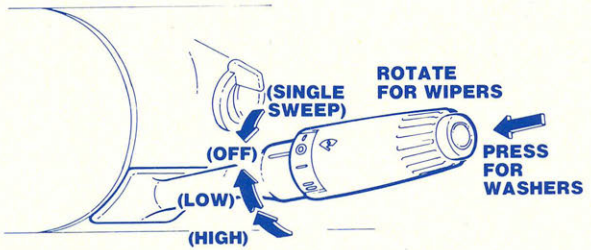
Using the two-stage operation it is possible to signal lane changing by exerting slight finger pressure on the stalk in the direction of intended vehicle movement. On release of finger pressure the stalk will return to the neutral position.

## WINDSHIELD WIPERS AND WASHERS

The wiper and washer mechanisms operate when the ignition switch is in either the ON or ACC positions.

**WIPER OPERATION** — The windshield wipers are operated by turning the end of the stalk clockwise from the O position:
— Position for slow wiper speed.
= Position for fast wiper speed.
To stop the wipers, turn the stalk back to the O position. An extra position is provided which operates the wipers for a single sweep only. From the O position turn the stalk anti-clockwise to the I position and release. The stalk will return to the O position and the wipers will sweep once across the windscreen and return to their rest position.

**Dwell Control** (where fitted). Refer to page 33.



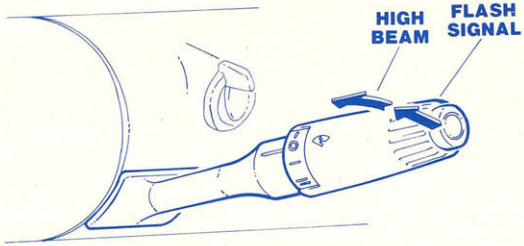
**WASHER OPERATION** — By depressing the button on the end of the stalk the electric washer pump is activated, spraying jets of fluid onto the area swept by the wiper blades. Washer fluid supply will only continue while the button is depressed. If the windshield wipers are not in operation at the time, depressing the stalk will automatically start them operating on slow speed and keep the wipers operating until turned off.

## HEADLAMP DIPPING

The combination stalk is also used to change the headlamp beam from low to high or high to low. To select high beam move the stalk rearward, towards the steering wheel and then release. Repeating this operation will change the beam from high back to low.

This means that each time the stalk is moved in this manner, the light beam will change. When the headlamps are operating on high beam a blue light located on the instrument panel will glow.

It is also possible to flash the high beam for signalling purposes without operating the light switch by moving the stalk rearward, towards the steering wheel. A light resistance will be felt at the flash position. Further movement towards the steering wheel will cause dip switch operation. The lights will remain on high beam as long as the stalk is held up. Operating the dipper switch alternates the light beams between low and high on both headlamps simultaneously.



# STARTING AND DRIVING

The following suggestions for starting and driving should be followed to assure the best operation of your new vehicle:

## PARKING BRAKE

Ensure that the parking brake is applied firmly while starting the engine. Release the brake just before driving away.

## MANUAL TRANSMISSION

Depress the clutch pedal and place the gear shift lever in the NEUTRAL position.

## AUTOMATIC TRANSMISSION

Place the gear selector in the N or P position. The neutral safety switch will not allow the engine to start in any other position.

## ENGINE

**COLD OPERATION:** These engines are equipped with an automatic choke system. Before starting a cold engine the accelerator pedal should be depressed slowly to the floor and then released. This action sets the choke system for starting. Turn the ignition key to the 'START' position. After the engine starts, allow it to run at fast idle setting in 'NEUTRAL' for approximately 20 to 30 seconds to promote quick warm-up. After the vehicle is driven off, the automatic choke system will gradually move to the inoperative position as the engine reaches normal operating temperature.

**NOTE:** Pumping the accelerator pedal can cause flooding and difficulty in starting. Should this occur, depress and hold the accelerator pedal fully to the floor while holding the ignition key in the 'START' position. After the engine starts, allow the accelerator pedal to return to the closed throttle position.

**WARM OPERATION:** Depending on engine temperature and for starting during warm summer months, the choke may operate only briefly or not at all. Starting can be accomplished by holding the accelerator pedal ¼ to ½ the way down while turning the ignition key to the 'START' position.

## INITIAL DRIVING

**MANUAL TRANSMISSION:** Depress the clutch pedal and place the gear shift lever into the first or the reverse gear position. Release the parking brake. Lightly depress the accelerator pedal to increase the engine speed while slowly release the clutch pedal to set the vehicle in motion.

**AUTOMATIC TRANSMISSION:** Depress the main brake pedal and release the parking brake. Place the gear selector lever into the DRIVE or REVERSE position. Release the brake pedal. Lightly depress the accelerator pedal to set the vehicle in motion.

# TRANSMISSION CONTROLS

## MANUAL TRANSMISSION

This transmission incorporates four (4) fully synchronised gears and a non-synchronised reverse gear.
The gear selection is as indicated by the shift pattern. Selection of forward gears should normally take place on a 1-2-3-4 sequence co-ordinating the clutch and accelerator pedal operation as required.

1 **FIRST GEAR (LOW)** — Having a synchromesh engagement, this gear can be engaged while the vehicle is moving in order to avoid overloading the engine, up to 25 km/h.

2 **SECOND GEAR (LOW INTERMEDIATE)** — Use this gear at slow speeds — less than 50 km/h when driving in traffic conditions. Also this gear gives improved acceleration and retardation when negotiating steep gradients, under suitable conditions.

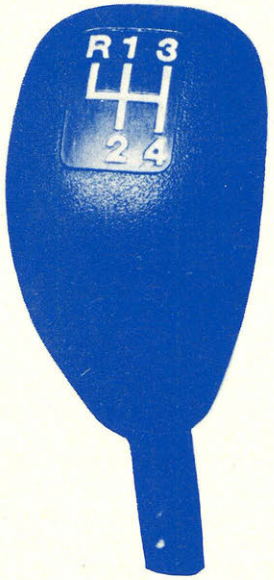
3 **THIRD GEAR (HIGH INTERMEDIATE)** — Use this gear for acceleration and retardation in the higher speed range of 50 to 80 km/h and where highway conditions are appropriate.

4 **FOURTH GEAR (HIGH)** — To be used for normal cruising down to approximately 50 km/h but an intermediate gear should be selected when acceleration or retardation is desired.

R **REVERSE** — This gear must only be selected when the vehicle is stationary. A **pause** after depressing the clutch pedal is desirable before moving the lever into R as indicated by the shift pattern.
The lever knob must be pressed down to pass the reverse gate path before selection can be achieved.

### BACK-UP LAMPS

When REVERSE is selected and the Ignition Switch is in the ON position, the rear turn-signal lamps will operate continuously.



## AUTOMATIC TRANSMISSION

This transmission is of an automatic three-speed design. The shift patterns are arranged with **Park P** position at one end followed in sequence by **R** (REVERSE), **N** (NEUTRAL), **D** (DRIVE), **S** (SECOND) and **L** (LOW). The automatic transmission is connected electrically through a neutral safety switch designed to permit starting of the engine **only** when the transmission selector is in **Park** or **N** positions. After starting the engine you need only to select the range desired (normally **D**), release the parking brake and gradually depress the accelerator. Gradual accelerator pressure will give the best fuel economy — Hard acceleration gives top performance, but lowers the fuel economy.

For additional braking effect, as is sometimes needed in mountainous terrain, select either **S** or **L** positions (Refer to later notes regarding speed limit recommendations).

**FLOOR SHIFT** This console located handle shift lever features a "straight-line" movement.

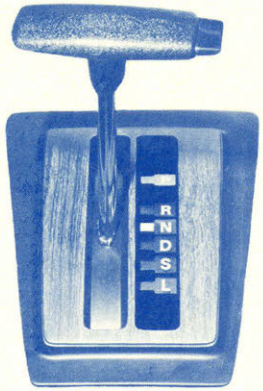
**Shift Lever Sequence: P** to **L** — Depress thumb-button to move from **P.**

Release of button before **R** will still allow selection through to **R**, to **N**, to **D**. Depress button again to select **S** or **L**.

**Shift Lever Sequence: L** to **P.**

**L** to **S** to **D** to **N** can be selected without depressing the thumb-button. Depress button to select **R** or **P.**

**CAUTION: Never depress the floor shift thumb button when shifting back to D after using S or L positions.**



**THE OPERATIONAL PROCEDURES FOR EACH SELECTOR POSITION ARE:—**

**P** **PARK** — This position is to be used in conjunction with the parking brake. **P** must never be selected when the vehicle is in motion. It is one of only two positions (the other is **N**) in which your vehicle may be started.

**R** **REVERSE** — For reversing; the vehicle must be stationary before selecting this gear.
(Refer to Page 22 for Back-up Lamps.)

**N** **NEUTRAL** — This position can be used to start the engine, especially if the vehicle is moving with a stalled engine; but never select **N** while driving normally. Also, if the vehicle has to be towed using the rear wheels, this position must be used. (Refer also to page 48.)

**D** **DRIVE** — For all normal forward driving. This position allows for the acceleration and cruising adequate for all but the most crucial driving situations. It permits the transmission to operate through its complete range of gear ratios and select the proper ratio for road and load conditions.

**S** **SECOND** — This position may be selected when travelling down a moderate grade where slight braking action is desired without brake application and the transmission will shift to second gear when the selector lever is placed in **S.**
Do not exceed 95 km/h when operating in this range.

**L** **LOW** — This position may be selected for maximum braking down severe grades under suitable conditions. When the selector lever is moved to **L**, the transmission will shift to first gear. The transmission selector lever must be shifted back to **S** or **D** positions before the transmission will again upshift.
Do not exceed 60 km/h when operating in this range.

**PASSING (Full Throttle Detent)**

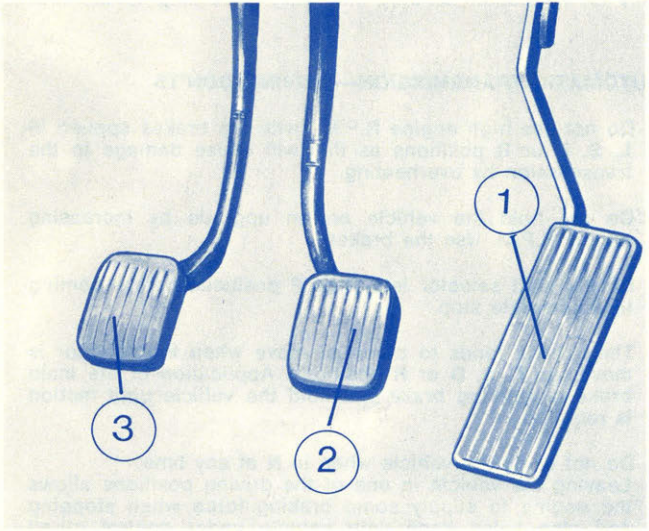
While driving, if the accelerator pedal is pressed down hard, in order to accelerate or pass other traffic, the following shift changes will normally occur automatically. The speeds given are only an indication as they may vary according to the rear axle and tyre options fitted.

| SELECTION | SPEED RANGES AND EFFECT |
|---|---|
| SHIFT LEVER IN **D** | Under 86 km/h the transmission will change into second gear. When the vehicle speed reaches 95 km/h it will change back into third gear. |
| SHIFT LEVER IN **D** | Under 50 km/h the transmission will change into first gear. When the vehicle speed reaches 60 km/h it will change back into second gear, and then at 95 km/h back to third gear. |
| SHIFT LEVER IN **S** | Under 40 km/h the transmission will change into first gear. When the vehicle speed reaches 60 km/h it will change back into second gear. Do not exceed 95 km/h when operating in this range. |
| SHIFT LEVER IN **L** | No changes will occur. Do not exceed 60 km/h when operating in this range. |

**AUTOMATIC TRANSMISSION—DRIVING DON'TS**

- Do not use high engine R.P.M., with the brakes applied in **L, S, D** or **R** positions as this will cause damage to the transmission by overheating.
- Do not hold the vehicle on an upgrade by increasing engine R.P.M. Use the brakes.
- Do not shift selector into **R** or **P** positions before coming to a complete stop.
- The vehicle tends to creep or move when the selector is moved to **L, S, D** or **R** positions. Application of the main brake or parking brake will hold the vehicle until motion is required.
- Do not coast the vehicle when in **N** at any time. Leaving the vehicle in one of the driving positions allows the engine to supply some braking force when stopping and also helps keep your vehicle under control at all times.

# FLOOR CONTROLS




1. Accelerator Pedal.
2. Main Brake Pedal.
3. Clutch Pedal (not with Automatic Transmission).

## BRAKE OPERATION

**CAUTIONS: Driving through water may affect brake performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal.**

**Brake pedal travel should not be obstructed by improper floor mats or other interfering material under the pedal.**

**Riding the brake by resting your foot on the brake pedal when not intending to brake, can cause abnormally high brake temperatures, excessive lining wear and possible damage to the brakes.**

## BRAKE FAILURE WARNING LIGHT

(Refer to Page 31 — Indicator Lights.)

In the event of the warning light being activated while the vehicle is moving and after the main brake pedal has been firmly used, pull across to the side of the road, braking as carefully as possible, but remember that:

1. Stopping distance will probably be greater.
2. Greater pedal effort may be required.
3. Pedal travel should be greater.

Then, try, if the road gradient is considered sufficiently safe, to stop the vehicle from a low speed several times, bearing in mind that:

1. If you judge such operation to be safe, proceed cautiously at reduced speed to the nearest GMH Dealer for inspection and rectification.

OR

2. If in your opinion the vehicle is not safe to drive, have it towed to a GMH Dealer for inspection and repair.

**CAUTION: Continued operation of the vehicle for normal use in this condition is dangerous.**

**NOTE:** This warning indicator is not a substitute for the normal maintenance check of the brake fluid level in the master cylinder.

## DUAL CIRCUIT BRAKE SYSTEM

The foot operated brake system of your vehicle has two separate hydraulic systems — one operating the front wheels, the other operating the rear wheels. Hydraulic pressure is provided from the foot activated master cylinder, which is a tandem design, and provides the same hydraulic pressure to each system.

Therefore, in the event of either the front or rear system being damaged and developing a fault through leakage, one set of wheels can still be braked with reduced effectiveness under increased braking pressure.

An attentive driver should immediately be aware of any change in the operating feel from the brake pedal in regard to length of travel and brake effectiveness as related to the pedal pressure applied — any change in normal operation at once indicates a non-standard condition and the situation should be carefully watched for a return to normality or checked at the nearest GMH Dealer or a service station, depending on the urgency of the situation.

## POWER ASSISTED BRAKE NOTES

Your vehicle is fitted with power assisted brakes which utilise engine intake manifold vacuum to reduce the braking effort required at the pedal. A built-in vacuum reserve will supply two or more brake applications after the engine has stopped.

With the engine switched off and the vacuum reserve exhausted the vehicle can still be stopped but much more effort will be required applying the brake pedal.

**CAUTION:**

**NEVER let the vehicle run down steep grades with the engine SWITCHED OFF.**

**NEVER coast with the engine SWITCHED OFF.**

**NEVER have the vehicle towed on four wheels without a solid connection between the towing vehicle. If necessary the vehicle will have to be towed by a tow-truck, i.e. with two wheels off the ground.**

## DISC BRAKES

No adjustment is required as the disc brakes automatically adjust themselves to compensate for brake pad wear.

A single piston floating head caliper is used to operate the clamping of the brake pads against the disc faces.

Also, with this braking system, a proportioning valve is incorporated in the hydraulic system. The function of this valve is to prevent premature rear wheel lock-up under emergency braking conditions.

## DRUM BRAKES

These are self-adjusting brakes which under normal driving operation eliminate periodic brake adjustment. The self-adjusting mechanism is actuated every time the brakes are applied firmly when the vehicle is moving in the reverse direction.

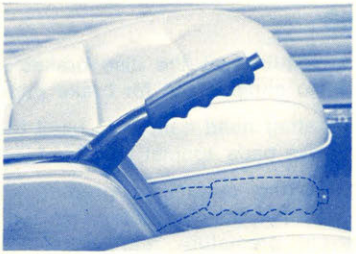
Should brake pedal travel become excessive, drive the vehicle backward and forward several times applying the brakes firmly to stop the vehicle without skidding the wheels. Pedal travel should return to normal after several reverse stops.

## PARKING BRAKE

The parking brake activating lever is mounted on the floor between the two front seats.

**To Apply.** Pull the lever straight up using the grip at the end of the lever. **Do not press the release button.**

**To Release.** Pull the parking brake lever upwards while simultaneously pressing in the release button at the end of the lever with the thumb. After the ratchet system disengages, retain pressure on the button while lowering the lever until it is fully down. (Refer illustration.)



**Parking Brake Operation**

### PARKING BRAKE WARNING LIGHT

With the ignition switch in the ON position the warning light will operate while the brake is not fully released.

When the brake has been fully released the parking brake warning light in the instrument panel will go out.

**Never drive the vehicle with the warning light on.**

## ACCELERATOR PEDAL

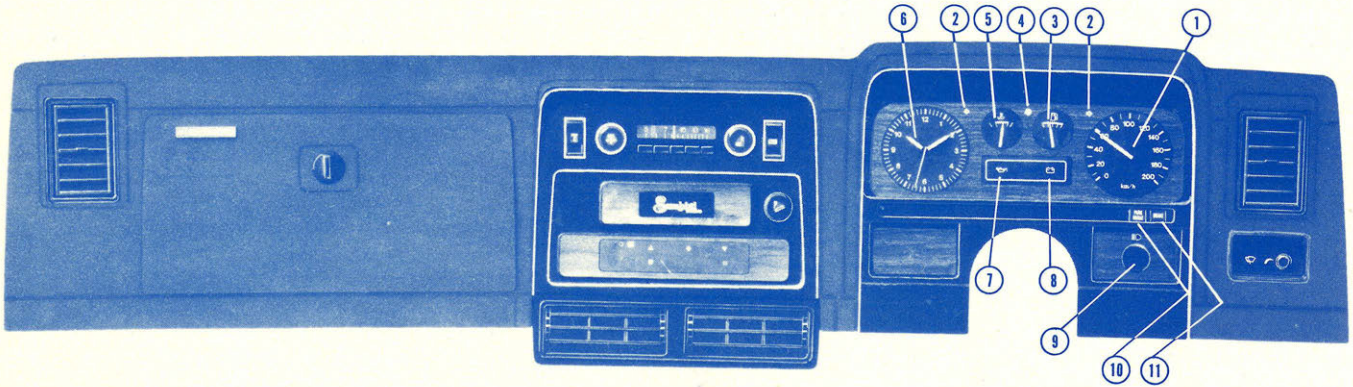
The accelerator pedal is used to open and close the carburettor throttle valve to vary engine power and thus regulate engine and vehicle speed.

## CLUTCH PEDAL

On models equipped with a manual transmission, the clutch pedal is used to engage and disengage the clutch, thereby connecting or disconnecting the engine from the transmission, driveline and rear wheels. When the pedal is fully depressed the clutch is disengaged, disconnecting the drive from the transmission and the rear wheels.

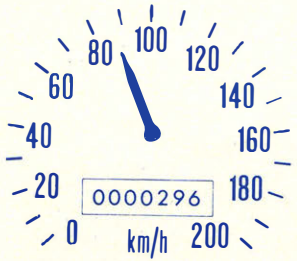
# INSTRUMENT PANEL

## STANDARD INSTRUMENT PANEL




1. Speedometer.
2. Turn Signal Indicator Lights.
3. Fuel Gauge.
4. Hi Beam Indicator Light.
5. Temperature Gauge.
6. Clock.
7. Oil Pressure Warning Light.
8. Generator Warning Light.
9. Light Switch.
10. Parking Brake Warning Light.
11. Brake System Failure Warning Light.

# INSTRUMENT DIALS




## SPEEDOMETER AND ODOMETER

The Speedometer face incorporates the odometer digits to show the distance travelled in kilometres. The speedometer is calibrated from 0 to 200 kilometres per hour (km/h).

## FUEL GAUGE

This gauge is electrically operated to indicate the proportionate amount of fuel contained in the fuel tank. The gauge is activated when the ignition switch is turned to the ON position. If the needle is operating in the graduations to the left of the gauge it means that the fuel level in the tank is getting low.

## TEMPERATURE GAUGE

(WHERE FITTED)

The gauge is calibrated to indicate the relative operating temperature of the cooling system. If the needle reaches the red section, (indicating high temperature) the engine should be stopped and allowed to cool down before attempting to locate the cause of the problem. (Refer page 60 for overheating instructions.) Check that no visible leaks are apparent from the cooling system or that the fan belt is not slipping or broken.

## CLOCK

(WHERE FITTED)

The clock is electrically energised, the time setting is adjusted by pulling out the knurled knob in the centre of the clock face to engage and rotate the dial hands. To fulfil its function, the clock operates at all times.

NOTE:—The adjuster on clocks fitted with sports instruments is on the right-hand side. It is also used as a starter and is operated by pulling it out and allowing it to snap back.

# INDICATOR LIGHTS

## GENERATOR

The red light will glow when the ignition switch is turned to the ON position. After the engine has been started, the light will go out and remain out. If the light should glow after the engine is running, the fault causing the problem should be located and corrective action taken.

## TEMPERATURE

The light will glow when the ignition switch is turned to the START position and will go out when the switch returns to the ON position. This system provides a regular check to see that the warning light is operating correctly. If the light comes on while driving, it could indicate overheating of the engine. The engine should be stopped and allowed to cool down before attempting to locate the cause of the problem. (Refer to Page 62 for instructions regarding the cooling system.) Check that no visible leaks are apparent from the cooling system and that the fan belt is not slipping or broken.

## OIL PRESSURE

The red light will glow when the ignition switch is turned to the ON position. After the engine has been started, the light will go out and remain out. If the light should glow after the engine is running above idle, stop the engine and the reason for the loss of oil pressure should be located and corrective action taken.

## PARKING BRAKE WARNING

PARK BRAKE

When the parking brake is applied with the ignition switch in the ON position, the light will glow until the parking brake is fully released.

## BRAKE FAILURE WARNING

BRAKE

If the indicator light glows at any time, it would indicate that there may be something wrong with the braking system. Immediately the indicator light glows, under these conditions, stop on the side of the road as carefully as possible. Do not proceed until satisfied that cautious progress is possible or that the cause of the problem has been located and rectified. (Reference should be made to brake operation on Pages 26-28.)

## HIGH-BEAM

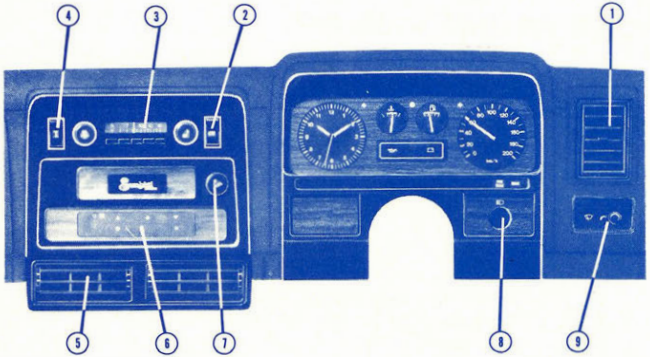
When the headlamps are on high beam a blue light located at the top of the speedometer dial will glow.

## TURN SIGNAL INDICATOR

The green turn signal indicator lights are located in the top corners of the speedometer.

One of these lights will flash when the right hand or left hand turn signal system is in operation. (Refer to page 19 for Turn Signal Operation.)

# CONTROL PANEL




1. Upper Ventilation Outlet.
2. Heated Rear Window Switch.
3. Radio.
4. Power Antenna Switch (where fitted).
5. Central Ventilation Outlet.
6. Ventilation Controls.
7. Cigarette Lighter.
8. Light Switch.
9. Dwell Wiper Control (where fitted).

## LIGHT SWITCH

Head lamps, tail lamps, parking lamps, instrument lighting and interior lighting are controlled from a single switch located on the driver end of the lower instrument panel.
The various operating positions of the switch control the lamps in the following order:—

### FULLY IN

No lighting switched on, but the interior lighting may be used. (Refer to Rotary Control — Interior Lighting.)

### OUT TO FIRST STOP

Parking, Tail, Licence Plate and Instrument Panel Lighting is switched on.

### OUT TO SECOND STOP

The headlamps are switched on in addition to the above.

### ROTARY CONTROL—INSTRUMENT LIGHTING

The brightness of the instrument lighting may be controlled by rotating the Light Switch, the brightness increasing as knob is turned anti-clockwise and decreasing when turned the other way, when the switch is in one of the out positions.

### ROTARY CONTROL—INTERIOR LIGHTING

This lighting may also be switched on through rotary control of the Light Switch and will be switched on when it is turned fully anti-clockwise.

## HEATER DEMISTER CONTROLS

(Refer pages 34-37 of the ventilation section for the correct method of operation of these controls.)

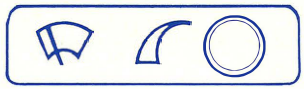
### CONSOLE FLOOR SHIFT SELECTOR—AUTOMATIC TRANSMISSION

The internal lighting of the console is controlled with the instrument panel lighting.

## CIGARETTE LIGHTER

To operate, simply press in on the lighter knob. It will stay in until the element is hot at which time the lighter will automatically "pop" back ready for use.

## WINDSHIELD WIPER DWELL CONTROL



**(Where Fitted)**

The dwell control can be switched into operation by turning the knob in a clockwise direction, from the initial position, which progressively increases the dwell period between wiper blade sweeps. Operation of the wiper blade speed control in either Slow or Fast positions will override the dwell control setting. If the wiper speed control is returned to the OFF position, the dwell control will take over at the particular setting being used. To turn off the dwell control, the knob must be turned back in the anti-clockwise direction to the switched OFF position.

## HEATED REAR WINDOW SWITCH

Where fitted, this enables the rear window interior surface to be heated by the conducting stripes adhered to the glass. The heating action will disperse any internal fogging or condensation in cold and/or humid conditions. When switched on a light in the switch will glow as a reminder. As soon as the condensation has cleared the heating should be switched off.

## RADIO AND POWER ANTENNA

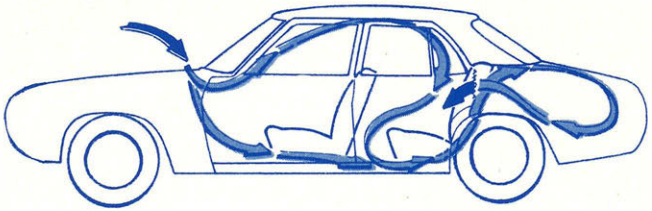
Where a radio or power antenna is fitted, the manufacturer's instructions relating to these options are supplied.

# VENTILATION SYSTEM

## EXPLANATION OF SYMBOLS FOR HEATER

| Symbol | Heater | Symbol Logic — Remarks |
|---|---|---|
| | Distribution Control Lever | Intake of outside air |
| | Distribution Control Lever | Outside air is distributed to the windshield for demisting and it can also be heated. |
| | Distribution Control Lever | Outside air is distributed to the floor outlets and it can also be heated. |
| | Fan Control Switch | 2 Speed Fan with Heater Units. |
| (Blue) | Heat Control Lever | Heater Units — outside air only is available. |
| (Red) | Heat Control Lever | Heater Units — Heated outside air only is available. |

## FLOW-THROUGH VENTILATION SYSTEM

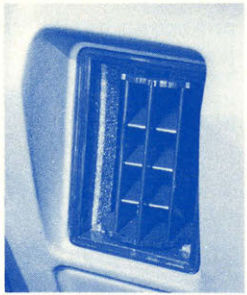


The vehicle features a flow-through ventilation system, which will operate with the windows closed.
The fan can provide a boosted air flow in traffic conditions and at low vehicle speeds.
Air enters the plenum chamber because of a pressure increase in front of the windshield due to the forward movement of the vehicle.

**NOTE:** Don't allow the plenum inlet grille to be covered or clogged with leaves, snow, etc.

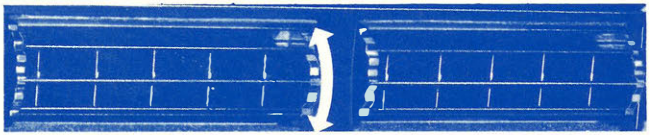
After entering the plenum chamber, through the grille in front of the windshield, the air is distributed to 2 Rotary-Type Vanes, set in the instrument panel, one on each side.

### UPPER OUTLETS



Located at each end of the Instrument Panel is an Adjustable Vane type outlet.
Adjustment of air flow direction can be made by positioning the vane louvers as desired. Air flow can be shut off by positioning the louvers to the closed position.

### CENTRAL OUTLETS



Located in the central ducting under the instrument panel are two adjustable rotary vane type outlets.

Vertical air direction is obtained by tilting the vanes to achieve the desired angle setting.

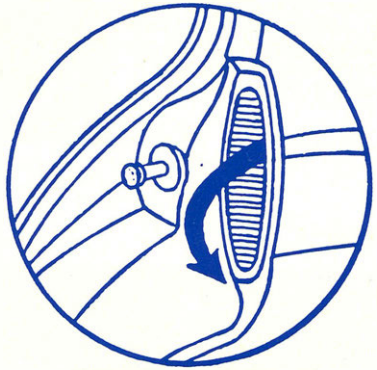
Horizontal air direction can be changed by rotating the vanes through 180°, as the vane design incorporates a deflecting angle. In this manner both outlets can be directed to the driver or both to the passenger or one to the driver and one to the passenger.

Air flow can be boosted at any time by using the fan.

## PRESSURE RELIEF VALVE

**(Flow-Through Exit)**

Two relief valves are provided to complete the control of the flow-through concept. These are situated in the rear body pillar.



**Sedan Model Illustrated.**

While the vehicle is moving and if the plenum chamber outlets are allowing air to flow into the vehicle interior, a slight pressure build up will occur if all the windows remain closed.

**NOTE:** When stacking luggage in the luggage compartment do not block the large holes at the seat back on Sedan models or the outlet grilles in the rear quarter trim panels on Hatchback models — as this will hinder the effectiveness of the flow-through ventilation system.

## DUSTY CONDITIONS

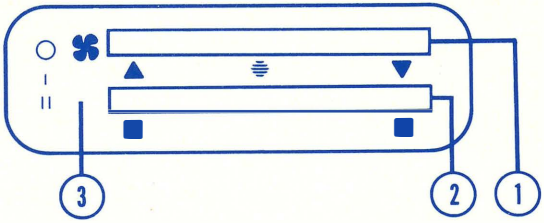
The main cause of dust entering the passenger compartment while a vehicle is moving, is the air pressure decrease that occurs in the compartment.

Therefore, under reasonably comfortable conditions, it is normally best not to open the windows **particularly in dusty conditions.**

**Reference should be made to the operating instructions for the Flow-Through Ventilation, Heater-Demister and Air-Conditioning systems, to fully understand the controls.**

## HEATER/DEMISTER

Where this unit is fitted, the control facia is positloned between the driver's door and the steering column, together with the light switch.




Heated air can only be supplled to:
(a) the demisting outlets,
(b) the floor outlets under the instrument panel.
Heated air is not available from the rotary type outlets at either end of the instrument panel.

### 1. DISTRIBUTION CONTROL LEVER

≡ In this posltion the air supply to the heater core is shut off but outside air is available via the central outlets. Use of the fan will boost air flow.

▲ All air is directed to the base of the wlndshield for demisting purposes providing the central outlets are shut.

▼ Most of the air is directed to the floor outlets while the remainder is bled to the demisting system. However, the central rotary vane outlets will allow frontal air flow if desired.

### 2. HEATER CONTROL LEVER

With the lever on the blue block no air is being heated. As the lever is moved towards the red block an increasing proportion of the air flow will be heated.
When the lever reaches the red block all air is being heated.

### 3. FAN SWITCH

O — The fan is switched off.
I — 1st (LO) speed.
II — 2nd (HI) speed.
The fan wlll only operate when the ignltion switch is in the ON or ACC positions.
Use the fan to boost the air flow whenever it is considered desirable.

### 4. CENTRAL ROTARY VANE OUTLETS

To direct maximum air to the central outlets set the distribution control lever on right drive to ≡ and on left drive to O and rotate the vanes to the open position. Use the fan to boost air flow if desired.

By moving the distribution control lever away from ≡ towards ▼ a proportion of air is directed to the floor outlets.

With the distribution control lever set at ▼ which directs air to the floor outlets a proportion of air is directed to the central outlets.

### 5. UPPER ROTARY VANE OUTLETS

At normal motoring speeds a flow of coolIng air can be directed towards the face to maintain driver and front passenger alertness, particularly during long distance travelling.
**NOTE:** By adjusting the five controls provided, a range of conditions can be achleved which are the most desirable for personal comfort.

# OTHER CONTROLS AND FEATURES

The following equipment described is subject to option selection and so may not be fitted to each vehicle.

## REAR QUARTER WINDOWS (Hatchback Only)

Hatchback models have opening rear quarter vents. Pull the catch at the rear of the window forwards and inwards to unlock the window. When closing the window make sure that the catch is firmly locked.

## GRAB RAILS

Three roof rail mounted grab rails are provided to assist passengers entry and departure from the vehicle. The two rear grab rails feature integral coat hooks.

## SUPERLIFT SHOCK ABSORBERS (Where Fitted)

These allow direct control of vehicle level, so that when a vehicle is loaded or towing a caravan or trailer, the loaded height can be re-adjusted to give improved vehicle attitude. Also, they maintain a better headlamp high beam level. Superlift shock absorbers use compressed air and can be inflated or deflated through an air valve, similar to any standard tyre.

### AIR PRESSURE VALVE

Located in side the luggage compartment at the right hand upper area and to the rear of the wheel housing.

### AIR PRESSURE RECOMMENDATIONS

1. Never allow the pressure to fall below 70 kPa as this will result in damage to the shock absorbers.

2. Maximum permissible pressure when the vehicle is fully loaded is 620 kPa.

3. Maximum permissible pressure when the vehicle is unloaded is 210 kPa.

4. The shock absorbers should be inflated when the vehicle is standing on a level surface and only until:

   (a) The vehicle trim attitude is level or the maximum permissible pressure is reached.

   (b) Satisfactory ride characteristics are obtained based on previous usage, but not exceeding the above limits.

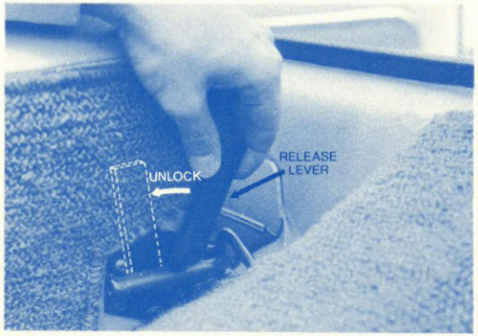
## HATCHBACK REAR SEAT CONVERSION

**CAUTION: Always avoid standing on the off side (driver's side) if the vehicle is parked at the kerb especially when altering seat positions or converting the rear seat.**

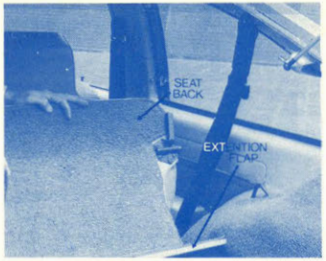
The rear seat on this model can be converted into a stowage area by folding down the seat back. Due to the split seat back design 3 variations can be achieved.

1. The left hand seat back can be folded down while the right hand seat remains upright as a passenger seat.
2. The right hand seat back can be folded down while the left hand seat remains upright as a passenger seat.
3. Both left and right hand seat backs can be folded down utilising the maximum stowage area.

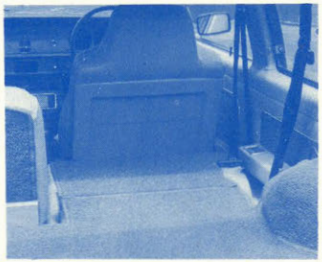
### CONVERTING THE SEAT BACK




To release the seat back unlock the safety catch, located on the rear outer edge of the seat back, by moving the release lever towards the centre of the vehicle. The lever is spring loaded and when released will return to its original position.




The lower edge of the seat back is pivoted and can then be folded forward into a flat position.



Final location of the seat is obtained by pushing firmly down on the top edge of the seat back and pressing the hinged extension flap on the lower rear edge of the seat so that it is level with the luggage compartment floor. With the extension flat in this position, releasing the pressure on the top edge of the seat back will hold the seat firmly in the down position.

### RECONVERTING THE SEAT BACK

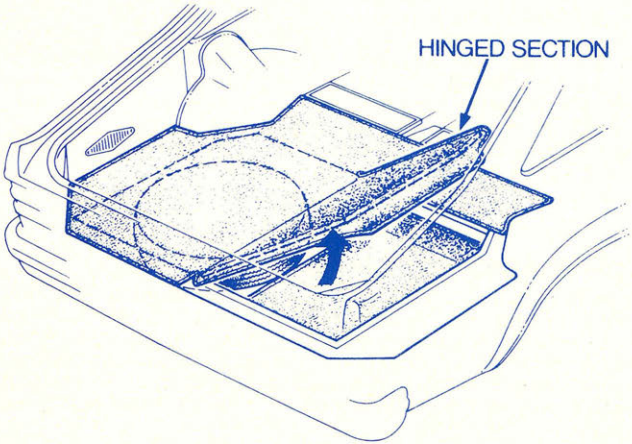
To return the seat back to its normal position, reverse the above procedure so that the floor extension may be released and the seat back pulled up into positon. The safety catches will automatically lock without having to touch the release lever. Ensure that the seat back is secure in the lock position without the seat belts being jammed in the rear seat back catches.

## HATCHBACK EXTRA STORAGE AREA

In the Hatchback models an extra storage area is provided in the luggage compartment floor which may be used in two ways.

One way this feature can be used is to store small articles which are of such size as to enable the lid to be fully closed. To use the stowage area in this way refer to the following instructions and the illustration below.

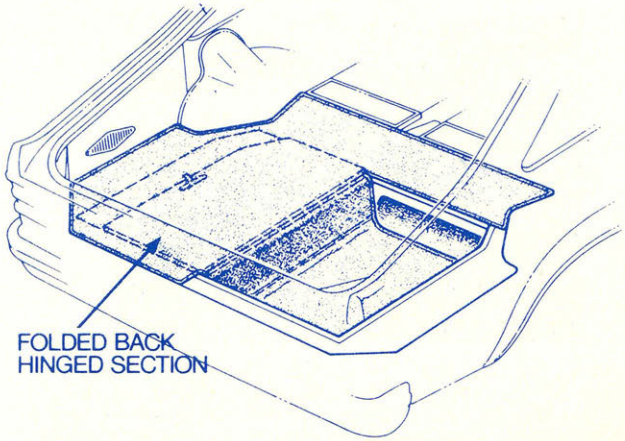
1. Lift the carpet from the right hand side of the luggage compartment to expose the hinged section of the floor.
2. Unlock by rotating the locking lever anticlockwise. The lid can then be raised to either store or remove articles.
3. Close the lid, relock the locking lever and then replace the carpet.




Another way this feature can be used is for a deep well stowage to gain extra storage height and space in the luggage compartment.

To use the stowage area in this way follow the instructions below.

1. Remove the carpet from the vehicle.
2. Unlock the right hand hinged section of the luggage compartment floor by rotating the locking lever anti-clockwise.
3. Fold the right hand hinged section (through 180°) onto the left hand section.
4. Re-lay the carpet over the folded down right hand section and fold the carpet into the storage area.



# SECTION – 3 IN CASE OF EMERGENCY

## EMERGENCY STARTING

**CAUTION: Never tow a manual transmission-equipped vehicle to start, because the surge forward when the engine starts could cause a collision with the towing vehicle.**

### PUSH STARTING

#### MANUAL TRANSMISSIONS

Should it ever be necessary to start the engine by pushing the vehicle —

1. Place the gear shift lever in NEUTRAL (N).
2. Check the accelerator pedal setting as it applies to the Starting Procedure (Refer to page 21.)
3. Turn the ignition switch to ON.

When the vehicle reaches approx. 15 km/h —

4. Depress the clutch.
5. Select high gear.
6. Slowly allow the clutch pedal to come up.

When the engine starts—

7. Drive away from the pushing vehicle.
8. Stop your vehicle at the side of the road.
9. Allow the engine operation to normallse before proceeding.

**Bumpers and other parts contacted by the pushing vehicle should be protected from damage during pushing.**

#### AUTOMATIC TRANSMISSIONS

If for any reason the starter motor is inoperative, it is **not possible** with an automatic transmission to select a range for starting the engine by pushing the vehicle.
If the fault is a flat battery, the engine can be started with the aid of a booster battery. (Refer Jump Starting.)

### JUMP STARTING

#### (USING A BOOSTER BATTERY)

The following procedure is for use **only** under the following conditions. Departures from these conditions and procedures, could result in: (1) serious personal injury (particularly to eyes) or property damage from such things as battery explosion, battery acid or electrical burns, or (2) damage to electronic components in either vehicle. If all the conditions cannot be met, or if you are uncertain about them, we strongly recommend for your safety and that of your vehicle that you leave the starting to a competent mechanic.
The battery in the other vehicle (booster battery) must be of the **same nominal voltage,** 12 volts, and must be negatively grounded. The nominal voltage and grounding of the other vehicle's battery may be determined by checking the specifications in its owner's manual. Use of a booster battery of a higher nominal voltage, or which is positively grounded may result in serious personal injury or property damage.
**CAUTION: Never expose a battery to open flame or electric spark — battery action generates hydrogen gas which is flammable and explosive. Don't allow battery fluid to contact eyes, skin, fabrics, or painted surfaces. The fluid is a sulphuric acid solution which could cause serious personal injury or property damage. Flush any contacted area immediately with water. Wear eye protection such as industrial safety spectacles or goggles when working on or near battery. Remove rings, metal watch bands and other metal jewellery before jump starting or working around a battery. Be careful in using metal tools and equipment. If such metal should contact the positive battery terminal (or metal in contact with it) and any other metal on the vehicle a short circuit may occur whch could cause personal injury. Batteries and battery acid should always be kept out of reach of children.**

**TO JUMP START:**

1. Position the two vehicles so they are **not** touching and set the parking brakes. Place the automatic transmission in PARK **(NEUTRAL for manual transmission)** in each vehicle. Also turn off lights, heater and all other unnecessary electrical loads.

2. Remove vent caps* (or covers) from both the booster and the discharged batteries. Lay a cloth over the open vent wells of each battery. These two actions help reduce the explosion hazard always present in either battery when connecting live booster batteries to dead batteries.

3. Attach one end of one jumper cable to the positive terminal of the **booster battery** (identified by a red color, + or P on the battery case, post or clamp) and the other end of the same cable to the positive terminal of the **discharged battery.**

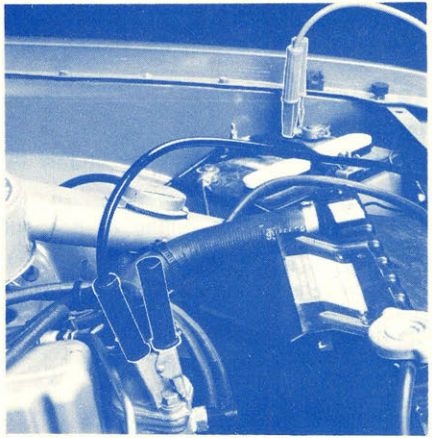
4. Attach one end of the remaining negative cable to the negative terminal (black color, — or N) of the **booster battery,** and the other end to your vehicle according to the illustrations opposite **(do not connect directly to negative post or dead battery)** taking care that the clamps from one cable do not inadvertently touch the clamps on the other cable. Do not lean over the battery when making this connection.

   **NOTE:** Remove the engine oil dipstick before making the last negative lead connection.

5. Start the engine in the vehicle that is providing the jump start (if it was not running). Let it run a few minutes, then start the engine in the vehicle with the discharged battery.

* Some batteries do not have vent caps.

6. Reverse the above sequence exactly when removing the jumper cables. Reinstall the vent caps and dispose in a safe manner, any cloths used to cover the vent wells (or covers), as the cloths may have corrosive acid on them.



The final earth connection is onto the nut at the battery ground lead attachment point.

# WHEEL CHANGING

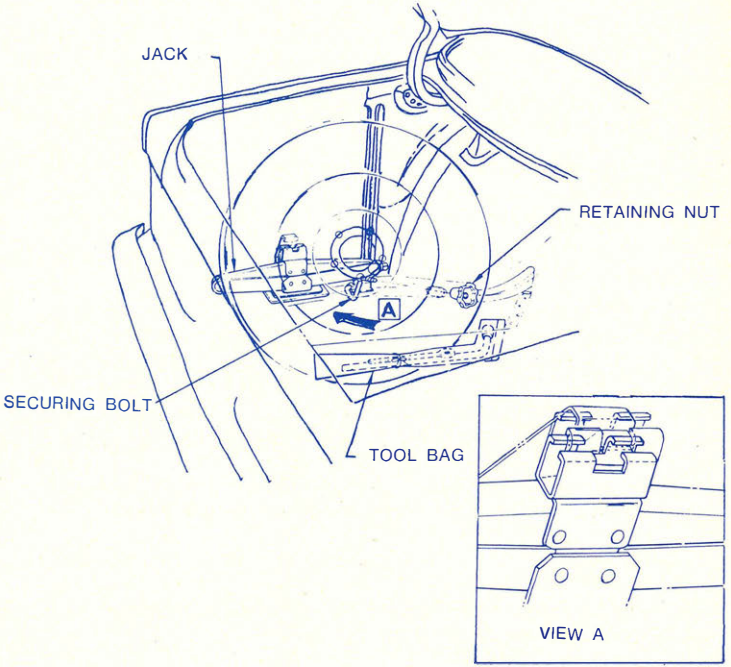
## SPARE WHEEL STOWAGE — SEDAN

### TO REMOVE

1. Unscrew the retainer nut and lift out the spare wheel.
2. Using the jack handle, lower the jack until it is clear of the retaining bracket, then remove the jack.

### TO REPLACE

1. Position the jack under the retaining bracket as shown.
2. Using the jack handle, raise the jack until it is held securely.
3. Place the jack handle and wheel nut wrench into the tool bag and locate as shown in the appropriate illustration.
4. With the valve stem facing upwards, position the wheel over the retaining nut bolt so that the bolt passes through one of the wheel stud holes.
5. Screw on the wheel retainer nut and tighten until the wheel is secure.



# WHEEL CHANGING

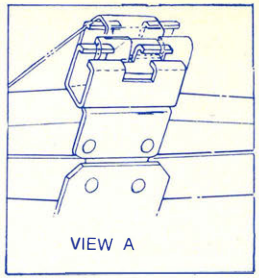
## SPARE WHEEL STOWAGE — HATCHBACK

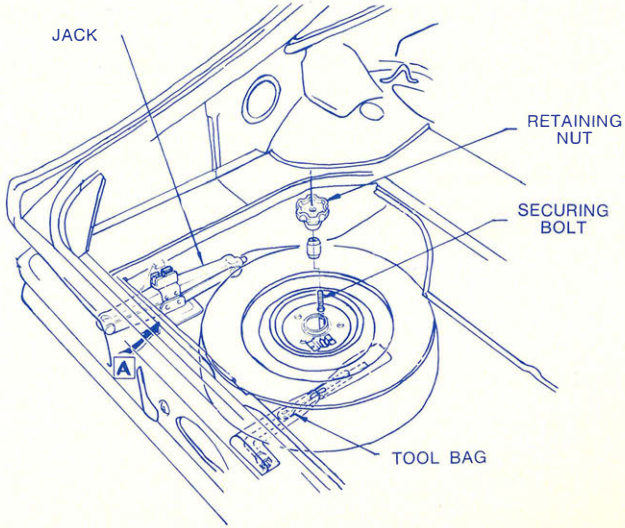
### TO REMOVE

1. Remove the carpet. Unlock the spare wheel cover board by rotating the right hand locking lever anticlockwise and the rear locking lever clockwise. Fold the right hand hinged section of the board (through 180°) onto the left hand section and then remove the assembly from the vehicle.
2. Unscrew the retainer nut and lift out the spare wheel.
3. Using the jack handle, lower the jack until it is clear of the retaining bracket, then remove the jack.

### TO REPLACE

1. Position the jack under the retaining bracket as shown.
2. Using the jack handle, raise the jack until it is held securely.
3. Place the jack handle and wheel nut wrench into the tool bag and locate as shown in the appropriate illustration.
4. With the valve stem facing upwards, position the wheel over the retaining nut bolt so that the bolt passes through one of the wheel stud holes.
5. Screw on the wheel retainer nut and tighten until the wheel is secure.
6. Replace the spare wheel cover panel and carpet.



## WHEEL COVERS

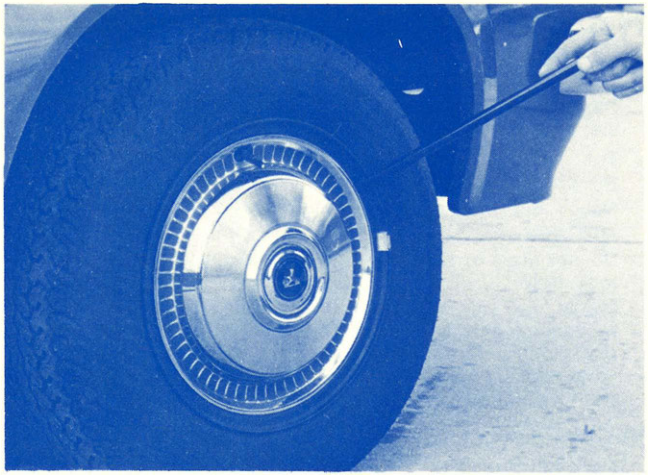
### TO REMOVE

Insert the blade end of the wheel nut wrench between the outer edge of the wheel cover and the wheel, diagonally opposite the tyre valve. With light blows using the palm of the hand and directed towards the wheel hub, force the wrench inwards for half the length of the blade (wedge) section. Then at several points around the wheel lightly pry the cover off by moving the wrench away from the tyre, using the wheel as a levering point.

### TO REPLACE

Position the cover so that the valve hole in the cover is directly over the valve. While pressing the cover firmly against the wheel at a position below the valve, knock the cover onto the wheel with several light blows using the palm of the hand. Repeat this operation at several positions around the edge of the cover until a secure installation is obtained.

**CAUTION: It may be necessary to protect the hand during this operation.**



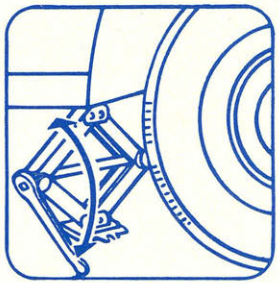
# WHEEL CHANGING

**CAUTIONS:**

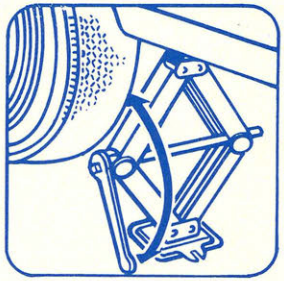
1. **Carefully follow jacking instructions in order to reduce the possibility of serious personal injury.**
2. **The jack is designed for use ONLY when changing wheels.**
3. **Never get beneath the vehicle when supported by the jack only.**
4. **Do not start or run the engine while the vehicle is on the jack only.**
5. **While the vehicle is on the jack excessive passenger movement or releasing of the parking brake could cause the vehicle to move off its jacked position. Therefore, wherever practicable it is best to disembark the passengers during the jacking operation.**

**INSTRUCTIONS**

1. Park on the most level surface available and set the parking brake firmly.
2. Set the transmission shift lever in REVERSE for manual transmissions and in PARK for automatic transmissions.
3. Remove the tools and spare wheel (Refer previous instructions).
4. Block the wheel diagonally opposite the jacking position.
5. Remove the wheel trim (Refer previous instructions). Using the wheel nut wrench slightly loosen the wheel nuts but do not remove them.
6. Position the jack under the vehicle according to the illustration opposite. Raise jack until it is positively located in area provided in underbody.
7. Operate the jack by using the ratchet handle to raise the vehicle so that the tyre just clears the ground.
8. Remove the wheel nuts and avoid losing them or getting dirt in the threads. Remove the wheel and change it over with the spare.
9. Tighten the wheel nuts finger tight and then partially tighten using the wrench.
10. By reversing the ratchet handle lower the vehicle until the wheel touches the ground and is held from rotating. Fully tighten the wheel nuts using the sequence illustrated. A load of approximately 25 kg on the end of the wheel nut wrench is adequate.
11. Completely lower the vehicle and remove the jack.
12. Replace the wheel trim and stow the tools and changed wheel according to the previous instructions.



**Front Jacking Position**



**Rear Jacking Position**

**CAUTION: As soon as practicable, after a wheel change, the wheel nut torques should be checked at a GMH Dealership, or by a competent person, to ensure correct tightness. Refer page 76 for wheel nut torque specifications.**

WHEEL NUT TIGHTENING SEQUENCE

# OVERHEATING

If, while the engine is operating, the temperature indicator light comes on (or where a temperature gauge is fitted and the needle moves towards the red area), particularly during high load pulling, bring the vehicle to a stop at the side of the road and allow the engine to idle for approximately 2 minutes only, to cool down, after which it should be turned off and the engine hood left open.
While the engine is cooling check whether the fan belt is slipping or broken and check all radiator hoses for leakage and damage, using care in case hot fluid is spurted out. When the engine is cool check the radiator coolant level according to the following instructions.

**CAUTION: DO NOT remove the radiator cap while the engine is still hot because the cooling system will blow out scalding fluid and steam under pressure which is likely to cause serious personal injury and loss of coolant. Therefore, the coolant level should be checked only when the engine has cooled down.**

**TO REMOVE THE CAP WHEN THE ENGINE IS COOL:**

1. Slowly rotate cap counterclockwise to detent. Do not press down while rotating.
2. Wait until any residual pressure is relieved — as indicated by a hissing sound.
3. After any hissing ceases, press down on the cap while continuing to rotate counterclockwise. Remove the cap, check the coolant level, and add water if necessary.

**IMPORTANT:** Never pour cold water into the radiator when the coolant is extremely low and the engine hot. Wait until the engine has cooled down, then run the engine at idle speed while slowly adding water.
If anything is found to be faulty **do not** run the engine until the cooling system has been checked and the fault rectified by the nearest Service Station, or preferably a GMH Dealer.
If no fault is found, switch the ignition to the ON position and if the warning light does not come on it indicates that the engine has cooled sufficiently to proceed carefully. Start the engine and continue driving, keeping a constant watch on the indicator light (or temperature gauge).
If the overheating condition occurs again stop the vehicle according to the previous instructions and arrange for a GMH Dealer or Service Station to check the cooling system. However if there is no indication that the overheating condition will occur again it is safe to proceed but it is recommended that the cooling system be thoroughly checked by a GMH Dealer at the first convenient opportunity.
**NOTE:** Radiator pressure caps should be checked annually by your Servicing Dealer for proper operation and replaced as required with the applicable AC type.

# FREEING THE VEHICLE FROM SAND ETC.

If it becomes necessary to rock the vehicle to free it from sand, mud or snow follow the appropriate instructions below.

## MANUAL TRANSMISSION

On manual transmission models, move the gear shift lever from second to reverse gear in a repeat pattern while applying light pressure to the accelerator but only when fully engaged in either gear. Do not race the engine.

## AUTOMATIC TRANSMISSION

On automatic transmission models move the selector lever from D to R in a repeat pattern while simultaneously applying light pressure to the accelerator.
**CAUTION: Do not spin the driving wheels in excess of 60 km/h as indicated on the speedometer. Personal injury and severe damage may result from excessive wheel spinning including tyre disintegration or rear axle failure.**

# TOWING A DISABLED VEHICLE

**CAUTION: If proper precautions are not taken the towing of a vehicle can be a hazardous operation. It is preferable under all circumstances to have the towing performed by an experienced tow truck operator with equipment which is specially designed for the purpose.**

All state laws concerning towing must be followed.
When towing a vehicle follow the towing equipment manufacturer's instructions. Use of a safety chain which is completely independent of the main towing attachment is essential for tow truck operation and strongly recommended when the vehicle is towed using a tow rope. When towing with the rear wheels on the ground the transmission should be in NEUTRAL and the parking brake released.
Vehicles with defective transmissions should not be towed unless the propeller shaft is removed. Vehicles equipped with automatic transmissions must not be towed at speeds in excess of 55 km/h or distances in excess of 55 kilometres unless the propeller shaft is removed.

**CAUTIONS:**

1. **Never have the vehicle towed on four wheels with the ignition switch in the LOCK or ACC position.**
2. **Where power brakes are fitted never have a vehicle towed on four wheels without a solid connection between the disabled vehicle and the towing vehicle, unless the engine is running.**
3. **Never tow a vehicle at speeds over 80 km/h.**
4. **Any loose or protruding parts of the damaged vehicle such as doors, hood, fenders, trims, etc. should be secured prior to moving the vehicle.**
5. **Points of attachment of the disabled vehicle should be inspected for damage or deterioration. If an attachment point appears damaged or deteriorated another point at a substantial structural member should be selected.**
6. **Never allow any passengers to ride in a towed vehicle.**

### 1. TOWING BY TOW TRUCK

The vehicle should be raised until the lifted wheels are a minimum of 10 cm from the ground, care should be taken to ensure adequate ground clearance at the opposite end of the vehicle.

**(a) Front Attachment** — The preferred attachment is to use hooks at the front inboard ends of the lower control arms where the arms attach to the front suspension crossmember with safety chains attached to the outboard ends of the lower control arms. Care must be taken that the hooks and chains are well clear of the rack and pinion steering gear and the steering tie rods. A suitable protective cross bar should be positioned across the vehicle under the radiator support sheet metal to protect lights, bumpers and painted surfaces.

**(b) Rear Attachment** — In cases of rear end damage it may be necessary to lift the rear end of the vehicle and tow on the front wheels only. In such cases the steering wheel must be clamped in the straight ahead position using a clamping device designed for towing service use, such as those provided by towing equipment manufacturers. Do not use the vehicle's steering column lock for this purpose.
Hooks and safety chains should be attached to the rear axle tubes and a suitable wooden cross bar with spacer blocks positioned across the vehicle resting on the underbody side members (not the fuel tank) to keep the towing equipment clear of the bumpers and painted surfaces.

### 2. TOWING BY A TOW ROPE TYPE ATTACHMENT

The tow rope and safety chains should be attached to the front suspension crossmember in a position well away from the rubber boots of the rack and pinion steering gear. This is necessary to avoid restricting steering movement of the towed vehicle. It may be necessary to use a wooden cross-bar under the radiator mounting to protect sheet metal panels from damage by the tow rope.

# SECTION – 4 APPEARANCE CARE

## AC Delco QUALITY CAR CARE PRODUCTS

**AC Delco Quality Car Care Products available through an authorized GMH Dealer for vehicle cleaning operations include —**

- POLISHING CREAM
- DEGREASER
- SYNTHETIC CHAMOIS
- WASH & WAX
- POLISHING LIQUID
- UPHOLSTERY CLEANER AND DEODORANT
- DEMISTER CLOTH
- OPTIKLEEN

# PAINT AND APPEARANCE ITEMS

**Imperfections in paint, trim or other appearance items would normally be apparent and corrected during New Vehicle Pre-delivery conditioning. Therefore, we suggest that if you find any paint or appearance imperfections, call it to the attention of your Dealer without undue delay as normal deterioration due to use and exposure is not covered by the New Vehicle Warranty.**

# VEHICLE CLEANING

A job always becomes easier when it is tackled In a systematic way, and vehicle cleaning is no exception. We suggest that if you set about the task of washing and polishing your vehicle in the following sequence the best results will be achieved:—

1. Brush out and clean the interior.
2. Carry out preliminary steps to washing.
3. Wash the exterior.
4. Polish the exterior and finish off.

Ask your GMH Dealer for the recommended range of AC Delco Quality Car Care Products.

**CAUTION: Many cleaners may be toxic or flammable, or may cause damage to the interior. When cleannng the interior, do not use volatile cleaning solvents such as: acetone, lacquer thinners, enamel reducers, nail polish removers; or such cleaning materials as laundry soaps, bleaches or reducing agents. Never use carbon tetrachloride, gasoline or naphtha for any cleaning purpose.**

**IMPORTANT:** Be sure the vehicle is well ventilated while using any cleaning agents. Follow the manufacturer's recommendations when using such products.

# CLEANING OF INTERIOR

## CARE AND CLEANING OF UPHOLSTERY

Dust and dirt particles which accumulate on the surface of the interior trim should be removed every few weeks — more often with constant hard driving. This can be done readily with a vacuum cleaner. Before attempting to remove spots and stains from an upholstery fabric, it is necessary to determine as accurately as possible:

1. The type of fabric,
2. The nature and age of the stain,
3. The effect of the stain removal agent upon the colour, structure and general appearance of the trim material.

It is esential that stains be removed from the trim material as soon as possible after they have been made, if they are allowed to remain on the fabric for any length of time they very often become oxidised or set, and removal becomes difficult, if not impossible.

### CLEANING P.V.C. COATED FABRICS

Vinyl (P.V.C.) coated fabrics are used for seating, headlining and auxiliary trimming. The grades used vary according to their function. P.V.C. fabrics are generally made with fabric bases upon which synthetic resins are applied. Care of P.V.C. fabrics is a relatively simple but important matter. The surface should be wiped over with a dry cloth during the regular cleaning of the vehicle. Should dirt accumulate and become embedded in the material pattern the following procedure is recommended:

1. Using lukewarm water and soap, work up thick suds on a piece of cheesecloth, and apply to the surface. A soft bristled brush can be used to advantage to remove stubborn stains or dirt embedded in the grain of the materlal.

2. The operation should be repeated using only a damp cloth and no soap.
3. The trim should then be wiped dry with a soft cloth.

The above cleaning instructions also apply to the rubber floor mats.

**IMPORTANT:** Where stubborn stains on P.V.C. fail to respond to the above methods, a light application of AC Delco Upholstery Cleaner and Deodorant (Part Number M37222) with a soft cloth will normally prove satisfactory.
**Do not use cleaner excessively.**

### CLEANING CLOTH TRIM MATERIAL

Where the seats in your vehicle are upholstered with cloth trim the following instructions should be observed.
Most loose dirt and dust can be removed by a vacuum cleaner or a soft brush. **Do Not Use a Whisk Broom or a Coarse Hair Brush.** If normal soiling should take place, it is recommended that the fabric be sponged lightly with warm water containing a detergent and a small amount of ammonia. The fabric should then be rubbed lightly, and if necessary, sponged again to remove anything stubborn. Soak up excess fluid with dry cloth. AC Delco Upholstery Cleaner may be used to advantage, but should be used sparingly.

## CLEANING CARPETS

Thoroughly brush or vacuum the carpet. In many instances the carpet may require no further cleaning. If the carpet is extremely soiled, thoroughly vacuum it to remove loose dirt; then using AC Delco Car Care Upholstery Cleaner, clean approximately one square foot at a time. After each area is cleaned, remove as much of the cleaner as possible with a vacuum cleaner. After cleaning the carpet, use an air hose to fluff the carpet pile, then dry the carpet. After the carpet is completely dried, use an air hose to again fluff the carpet pile.

## WOOD GRAINED INSERTS

Wood grained finish should be wiped over with a dry cloth during general cleaning of the vehicle. If further cleaning is necessary, lukewarm water and soap may be used. Dry the area thoroughly with a soft dry cloth.

## CLEANING SEAT BELTS

Cleaning of the seat belts can be carried out by using a mild non-abrasive soap and lukewarm water. After washing be sure to thoroughly sponge the washing solution out of the belts.

**CAUTION: Do not bleach or dye belts since this may severely weaken them.**

## CLEANING ASH TRAYS

### FRONT SEAT

To remove, depress the spring loaded fire shield in the centre and carefully withdraw. The tray can then be emptied and cleaned. To replace reverse this procedure.

### REAR SEAT

To remove, depress the spring loaded tab in the centre and carefully withdraw. The tray can then be emptied and cleaned. To replace reverse this procedure.

### GLASS

The interior glass areas of the vehicle should be cleaned using a non-abrasive household detergent and clean, soft cloth.

# CLEANING OF EXTERIOR

## PRELIMINARY STEPS

**CAUTION: Care should be used when moving the vehicle after washing, in case water has affected the brakes.**
Frequent hosing and washing of the vehicle cannot be overstressed as the most effective precaution against corrosion. Other items requiring attention before washing the vehicle are as follows:—

### 1. UNDERBODY CLEANING

The effects of salts and other corrosive materials from road surfaces can result in accelerated rusting and deterioration of underbody components such as brake and fuel lines, frame, underbody floor pan, exhaust system, brackets, parking brake cables. These corrosive effects, however, can be reduced by periodic hosing of the underbody with plain water whenever the vehicle is being washed. In geographic areas having a heavy concentration of corrosive materials it is recommended that the complete underbody be inspected and washed at least once each year, preferably after a winter's exposure. Particular attention should be given to cleaning out underbody members where dirt and other foreign materials may have collected.

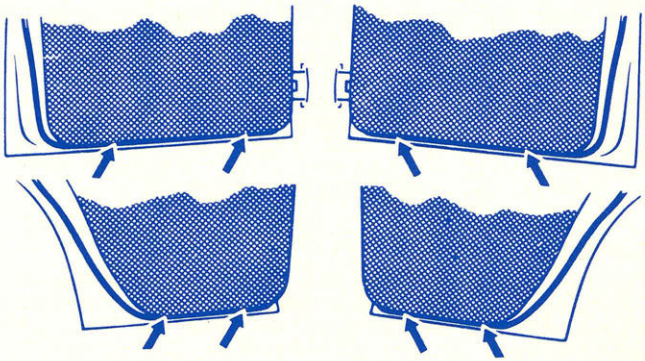
### 2. CLEANING VINYL TOP WHERE FITTED

The top should be washed frequently with neutral soap suds, luke-warm water and a brush with soft bristles. After the entire top has been cleaned, rinse with clear water to remove all traces of soap.

**IMPORTANT:** Do not use volatile cleaners or household bleaching agents on the vinyl top material.

### 3. DOOR DRAIN HOLES

It is important that the drain holes at the bottom of the door panels are checked to make sure that they are free of dirt and foreign matter, which could trap water inside the panels. Clogged drain holes can be cleaned with a small screwdriver and these drain holes are angled back towards the rear of the vehicle. (Refer illustration below.)



### 4. ROCKER SILL VENTS

In all model bodies there are vents which hould be regularly checked to see that they are clear of blockage, using a blunt ended instrument.

These vents are formed as cut-outs in the sheet metal along the bottom edge of the rocker sill, being evenly placed between the front and rear wheel arches. (Refer illustration below.)

### 5. GLASS

Special care should be taken to avoid scratching the glass when it is being cleaned. If it is cleaned at the same time as the rest of the vehicle, there is a possibility that particles of grit will cause fine scratches. An accumulation of these on the windshield can make night driving very unpleasant. Flush off any heavy mud deposits on the glass when washing the body, but leave the final cleaning and polishing until afterwards.

Each section of glass should then be washed in turn, making sure that the water, its container and the sponge are quite clean and free from grit. If the glass is very dirty, a little household ammonia mixed with warm water will help. Clean old linen cloth is better than new material for polishing glass.

## INSECT SPOTS

Insect spots on the paint finished parts of the vehicle can be easily washed off by using a solution containing 2 litres of water in which approx. 220 grams of baking soda (Bicarbonate of Soda) has been dissolved. Flush the washed parts with clean water. After washing and drying, park the vehicle in a shaded area.

## WASHING

The acrylic lacquer finish on your vehicle is superior to ordinary lacquers and will stay bright and new looking for years with little or no polishing, provided it is given a reasonable amount of regular washing to keep off road grime.
To preserve the original paint finish of the vehicle, it is essential that it is kept clean by frequent washing. Washing not only removes dirt and road grime that settles on the vehicle, but also dilutes acids which accompany such grime, in particular, salt from air or sea spray encountered in coastal areas which often become trapped in crevices. Tree sap, road tar, excretion from insects and industrial fall out often contain harmful chemicals and other foreign matter that may permanently damage the paint finish of the vehicle. These should be removed without delay, using an effective removal agent.

### REGULAR WASHING

If the vehicle is in continuous use, it should be washed at least once a week with either cold or warm water (preferably running water), using clean chamois leathers, sponges or rags free from dirt or grit likely to scratch the paint finish. It is good practice to first hose the vehicle to remove as much of the grit and grime as possible before swabbing the surface. Do not wash the vehicle under bright sunlight when high temperatures are being experienced, as this will result in a streaky, watermarked finish.
AC Delco Wash and Wax (Part Number M37226) loosens road grime to make washing easier and leaves paint shining clean.
**IMPORTANT:** If petrol is spilt on the paint finish when refilling, owners are advised to ensure that it is flushed off with clean water immediately. The reason is that petrols currently in use have a tendency to stain or soften new paint finish during the weathering out period, particularly when the vehicle is exposed to high temperatures.

**NOTES:** 1. Calcium chloride and other salts, road oil and tar, tree sap, chemicals from factory chimneys and other foreign matter may damage any known automobile finish if allowed to remain in contact with the paint film.
2. Some chemical cleaners used for removing road oils and tars from painted surfaces have been found to be detrimental to acrylic finishes. When purchasing a cleaner, polish or wax, ensure that it can be safely used on an acrylic finish.
3. Grease and oil — and even tar if it's fresh — can be removed from the finish with a little Kerosene or White Spirits. As a precaution against staining, wash and polish as soon as possible the area from which the foreign matter has been removed.

## TYRES

Sponging with cold water is all that is necessary for normal cleaning of the tyres. Oil and grease can — and should — be removed with soap and water or detergent. For tar or other substances, a mild abrasive, such as mechanics' hand soap or kitchen cleaning powder, may be used if necessary. Thoroughly wash the tyres with water to finish. Petrol must not be used for cleaning tyres.
New Tyre look can be restored by using Tyre Black.

### CARE OF COLOURED SIDE WALL TYRES

Road grime and kerb marks may easily be removed by use of a mild soap, or detergent, warm water and a stiff brush. Do not use petrol, kerosene or any oil products that will discolour the side walls and deteriorate the rubber. Thoroughly rinse with water to remove cleanser.

## POLISHING

Even though the acrylic lacquer finish on your vehicle is more durable than ordinary lacquers, under certain conditions you may wish to polish your vehicle to provide maximum protection against road dirt and industrial fall out etc. Also, the application of a polish may be required to remove foreign matter which is not normally removed from vehicles by washing. Over a period of time, such foreign matter may build up on the paint surface to the detriment of its overall appearance.

**Do not attempt to apply a polish without first washing to remove existing loose grit, surface dirt, dust or grease, etc.** Either AC Delco Polishing Liquid (Part No. M37221) or AC Delco Polishing Cream (Part No. M37220) will quickly and easily impart a deep, rich shine when used as directed on the container.

## CHROMIUM PLATED PARTS

Generally, a rub with a clean soft cloth will be all that is necessary to remove dust from the chromium plated parts. However, if the chromium is covered with dead insects or mud, it should be washed with warm soapy water and then cleaned with AC Delco Polishing Liquid (Part Number M37221). This polish should also be used if the chromium shows signs of tarnishing. Do not use ordinary metal polishes as they may contain abrasives which would ruin the plating.

## PAINT WORK INSPECTION

Regular inspection of the vehicle should be made for scratch marks, cracks or damaged areas, all of which could develop rust and thus affect paint finish. Any deep scratches, cracks or breakdown in the finish should be repaired without delay. Care should be taken to ensure that any rusting is counteracted immediately, otherwise rust 'creep' will extend beyond the damaged area. This applies particularly in sub-tropical areas or coastal districts, where the moist, or salt-laden atmosphere accelerates rusting if it is allowed to develop through neglect. The paint finish of the vehicle gives a very high degree of protection against the weather, but it should be realised that wear and deterioration occur when the vehicle is exposed to elements for prolonged periods.
The vehicle therefore should be garaged whenever possible.

## GENUINE GM REPLACEMENT PARTS AND ACCESSORIES

GM Parts & Accessories Division of General Motors-Holden's Ltd. is established to distribute Genuine GM Parts through Authorized GMH Dealers located throughout the Commonwealth from whom you can obtain new parts as required.
Genuine GM Parts are manufactured to the high standards of quality established for General Motors-Holden's vehicles — to the correct specifications and of the same materials as the original parts on your vehicle. They are, therefore, guaranteed, and it is definitely to your interest to specify them.

# SECTION – 5 SERVICE AND MAINTENANCE

## ENGINE

**CAUTION: As with any machinery, extreme care should be taken when performing any inspection, maintenance, or repairs so as to prevent accidental injury. Improper or incomplete servicing could also result in vehicle operational problems which may lead to serious personal injury, or damage to the vehicle. Should you have any doubts about performing any operation, have it performed by a qualified workshop such as a GMH Dealer.**

### FUEL REQUIREMENTS

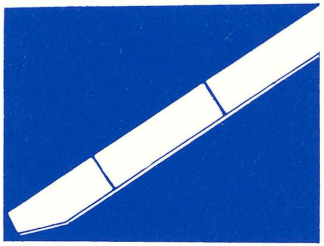
The vehicle is designed to operate on a good quality clean fuel. The major Australian Oil Companes produce their petrol according to the following ratings.
Regular (Std.) Grade: 89 Petrol Research Octane Rating
Premium (Super) Grade: 98 Petrol Research Octane Rating
(Refer to page 75 for the correct engine octane rating.)
Use of a fuel which is too low in anti-knock property will result in "pre-ignition" (a metallic rapping noise generated during the combustion process). If pre-ignition persists, consult an authorized GMH Dealer. Continued operation of an engine which exhibits symptoms of pre-ignition, may result in damage for which General Motors-Holden's is not responsible under the terms of the Warranty.

### INITIAL OIL FILL

A high quality SE oil was installed in your engine at the factory. It is not necessary to change this factory-installed oil prior to the recommended normal change period. However, check the oil level more frequently during the running-in period since higher oil consumption is normal until the piston rings become seated.
**NOTE:** Non-detergent and other low quality oils are specifically not recommended. Only the use of SE engine oils and proper oil and filter change intervals assure you of continued proper lubrication of your vehicle's engine.

### MAINTAINING OIL LEVEL

The oil level indicator is marked ADD and FULL. The oil level should be maintained between these two markings, neither going above the FULL marking nor under the ADD marking. Check the oil level frequently and add oil when necessary. To check the oil level accurately, the vehicle must first be on level ground and the engine should be stopped for at least ten minutes. Checking the oil level too soon after stopping the engine will not allow sufficient time for oil, which has circulated to the upper parts of the engine, to drain back into the engine oil pan, and consequently, a false low reading will be obtained. Topping up under these conditions will result in the oil pan being over-filled.
Remove the indicator, wipe it clean with a clean cloth or paper before reinserting it firmly. Pause for a second, then withdraw the indicator to check the reading of the oil level.



**Oil Indicator Level**

The distance between the marks represents approximately 0.75 litre.

Oil level should be checked more often during the running-in period since somewhat higher oil consumption could be experienced until piston rings become seated.

## OIL CONSUMPTION

In many cases, it is erroneously thought that engines should not use any noticeable amount of oil between oil changes. In actual fact every internal combustion engine should use a certain amount of oil to act as a lubricating and cooling agent, especially during the running-in period.
There are several factors that contribute to oil consumption, apart from mechanical malfunction, that should be noted, and these are: the type of oil, the seating of piston rings, the oil level, and the conditions under which the vehicle is operated.

### RUNNING-IN

The initial factory-fill oil should remain in the engine for the recommended period. (Refer this section.) Oil consumption may be higher during the running-in period.

### LUBRICATION

An engine is dependent on oil to lubricate the cylinder walls, pistons, rings, valve stems and other moving components. A film of oil is left on the cylinder walls and burned on the next firing stroke while the film on the inlet valve stems is drawn into the combustion chamber and burned. These quantities, while small, explain why an engine does use some oil.

### OIL LEVEL

Maintaining a proper oil level is also an important factor in controlling oil consumption. An overfull crankcase allows the moving parts in the crankcase of an engine to splash oil on to the cylinder walls in quantities greater than the piston rings can control. This excess oil will be drawn into the combustion chambers and burned.

Overfilling the crankcase can result if the oil level indicator markings are not understood. (Refer to previous notes.)

### DILUTION

Probably the most prevalent complaint of oil consumption comes from the motorist whose vehicle is driven at below normal operating temperatures for long periods of time. The oil becomes diluted by fuel and moisture which settle in the crankcase, raising the oil level and creating a false reading on the oil level indicator. For example, in a vehicle that has accumulated 1500 kilometres of city operation and has consumed a normal amount of oil, the level may not have dropped from the FULL mark, due to dilution. If this vehicle is then driven for some distance at highway speeds on a warm day, the dilution elements evaporate, lowering the oil level and the motorist assumes that the oil is being lost.

### SPEED CONSUMPTION

Sustained high engine speeds will increase oil consumption because higher speeds increase engine temperatures which lower oil viscosity and allow more oil to reach the combustion chamber.

If it is considered that the above possibilities can be accounted for but excessive oil consumption appears to continue, then it is recommended that you discuss the situation with a GMH Dealer.

**NOTE:** Non-detergent and other low quality oils are specifically not recommended. The use of break-In oils, tune-up compounds, friction-reducing compounds and other supplemental additives are not recommended; their use will only increase operating costs.

**REMINDER:** The use of proper engine oils and observing oil change intervals are your best assurance of continued reliability and performance from the engine of your vehicle.

**In the event of an operational problem, consult your GMH Dealer for advice before using supplemental additives.**

## OIL FILTER REPLACEMENT

The full-flow oil filter, with non-return check valve, filters all the engine oil delivered by the oil pump. For this reason the interval of filter change is very important.

The oil filter should be replaced every six months or 10,000 km whichever occurs first, independent of oil change intervals.

Under prolonged dusty driving conditions it is recommended that the oil filter be replaced more often.

**NOTE:** After the oil filter has been replaced, an additional 0.8 litres of oil must be added.

Always use AC brand of oil filters, for replacement purposes.

## OIL CHANGE INTERVALS —
### (ONLY 'SE' GRADE OIL SHOULD BE USED.)

The engine oil change interval is dependent on the type of operation of the vehicle and on the climatic conditions in which it is operating. The chart given below indicates the change interval recommended for normal operating conditions.

## NORMAL OPERATING CONDITIONS

| Prevailing Daytime Temperature | Regular Oil Change Interval |
|---|---|
| ABOVE 10°C | EVERY 6 MONTHS OR 10,000 km —WHICHEVER OCCURS FIRST. |
| BELOW 10°C | EVERY 1 MONTH OR 5000 km —WHICHEVER OCCURS FIRST. |

## ABNORMAL OPERATING CONDITIONS — EVERY 1 MONTH OR 5000 km

Under prolonged dusty conditions it is recommended that oil changes be made more often than shown in the table. Long runs at high speeds under high ambient temperatures with the resultant high engine operating temperatures, may oxidize the oil, forming sludge and varnish. While no definite drain intervals can be recommended under these conditions, they should be more frequent than under normal driving conditions.

However, owing to present day operating conditions, more vehicles are at the other extreme, that is, they are driven so that they seldom have the opportunity to attain and maintain efficient engine operating temperatures. This applies to city and suburban driving, where short distances are travelled. Under severe conditions such as these, sludge forms in the engine more readily, thus necessitating more frequent oil change intervals.

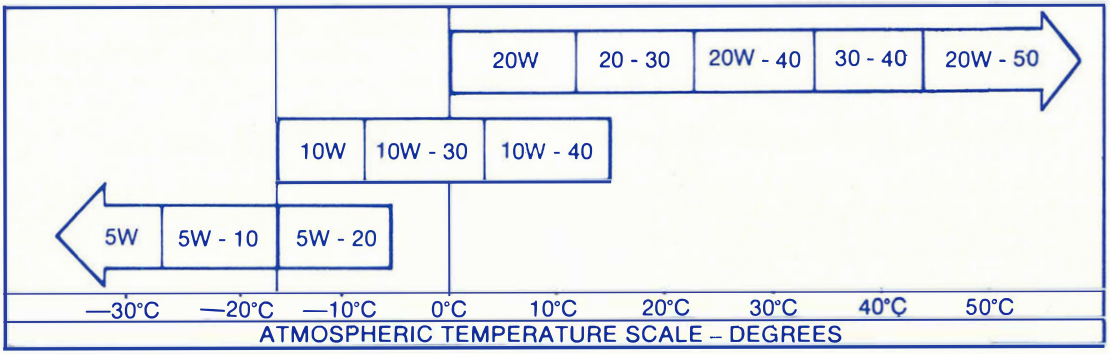
**IT IS RECOMMENDED THAT YOU SEE YOUR GMH DEALER FOR ADVICE ON THE FREQUENCY OF OIL AND FILTER CHANGES UNDER UNUSUAL DRIVING CONDITIONS.**

## ENGINE OIL VISCOSITY GRADES
### (ONLY 'SE' GRADE OIL SHOULD BE USED)

The grade of crankcase oil should be selected to give the best performance under the climatic and driving conditions in the territory in whlch the vehicle is driven. When the crankcase is drained and refilled, the crankcase oil should be selected, not on the basis of the existing temperature at the tlme of the change, but on the atmospheric temperature range anticlpated for the period durlng which the oil will be used.

During warm or hot weather, an oil which will provide adequate lubrlcation under high operating temperatures ls required. During the colder months of the year, an oil which will permlt easy starting at the lowest atmospheric temperature likely to be encountered, should be used.

**The Chart below will serve as a guide in selecting the proper S.A.E. viscosity grade of oil.**




**NOTE:** Use one of the following S.A.E. Grades for sustalned hlgh speed driving: 20-30; 20W-40; 30-40; 20W-50.

# SEAT BELTS

In the interest of safety seat belts should be checked regularly. Your Dealer will inspect and test the belts for you as part of the normal Guardian Maintenance Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belts and reduce their effectiveness, in preventing injury, in an accident.

# TRANSMISSIONS

## MANUAL TRANSMISSION

Check the lubricant level and add oil if necessary to fill the transmission to the level of the filler plug hole.

Frequency — At the first 3 months or 5000 kilometres and then at every 6 months or 10,000 kilometres. (Refer to Page 66 for recommended oil specification.)

## AUTOMATIC TRANSMISSION

### FLUID RECOMMENDATION

Use automatic transmission fluids identified with the mark DEXRON® or DEXRON® II, available from your GMH Dealer. Check the fluid level at each service. To make an accurate fluid level check:

1. Drive the vehicle several kilometres, making frequent starts and stops, to bring the transmission up to normal operating temperature, approximately 80°-90°C.
2. Park the vehicle on a level surface.
3. Place the selector lever in 'Park' and leave the engine running.
4. Remove the dipstick and wipe it clean.
5. Reinsert the dipstick until the **cap seats.**
6. Remove the dipstick and note the reading.

If the fluid level is at or below the ADD mark, add sufficient fluid to raise the level to the FULL mark. .5 litres raises the level from ADD to FULL. **Do not overfill.**

Under normal driving conditions, the transmission fluid should be changed every 24 months or 40,000 kilometres. If your vehicle is driven extensively in heavy city traffic during hot weather, or is used to pull a trailer, change the fluid every 12 months or 20,000 kilometres. Likewise, operators of vehicles in commercial use such as taxicabs, hire vehicle or patrol vehicle services where the engine idles for long periods, should change fluid every 12 months or 20,000 kilometres.

### SERVICING

As all adjustments, cleaning and servicing, of automatic transmissions requires specialised equipment and knowledge it is recommended that these operations be performed by an authorised GMH Dealer.

# REAR AXLE

Every six months or 10,000 kilometres whichever occurs first, check the lubricant level and add oil if necessary to fill the rear axle to the level of the filler plug hole (refer to page 66 for recommended oil specification).

# COOLING SYSTEM

The function of the cooling system is to keep the engine at its most efficient operating temperature under all driving conditions. Therefore care and proper servicing of the cooling system is essential to maintain its maximum efficiency.

## IMPORTANT—CORROSION PROTECTION

For maximum corrosion protection of the cooling system it is essential that water of a high purity be used in conjunction with an approved corrosion inhibitor.

In many areas of Australia, particularly in areas of low rainfall where water with high mineral or chemical content is common, rain water or distilled water must be used for top-up and complete fill purposes.

Where other water, such as borewater, has been used in an emergency, immediately it is possible, drain and flush the cooling system and refill using clean water and the recommended quantity of corrosion inhibitor.

Ensure that the correct mixing instructions are observed when adding the corrosion inhibitor.

## RADIATOR PRESSURE CAP

With the radiator pressure cap fitted, the cooling system can function at a temperature in excess of 100°C without boiling.

**CAUTION: Therefore, if the cooling system is hot, the radiator cap must not be removed quickly — it should be rotated slowly to the first stop, which permits the pressure to release slowly through the overflow pipe. The cap must not be removed completely until all the pressure is released, consequently, it is advisable to cover the cap with a cloth as protection against steam. Unless this precaution is taken the coolant may boil when pressure is released and some of it be ejected from the filler neck of the radiator, causing injury to persons or damage to the vehicle finish.**

**Never pour cold water into the radiator when coolant is extremely low and the engine is hot. Such a sudden change in temperature may result in cracking the water jackets. It is advisable to allow the hot engine to cool for 10 to 15 minutes, then run the engine at idle speed while slowly adding water.**

## THERMOSTAT

The cooling system is protected and controlled by a thermostat installed in the engine coolant outlet to maintain a satisfactory operating temperature of the engine. This thermostat is designed for continuous use through both winter and summer and need not be changed seasonally.

## FILLING THE COOLING SYSTEM

Running an engine with the coolant level low enough to cause boiling will result in engine damage. The coolant level should be checked when the engine is cold and then only enough water should be added to bring the level to approximately 2 cm below the bottom of the filler neck. This procedure must be followed as excess water containing inhibitor will be expelled during the warm-up period, due to expansion, which will deplete the concentration of inhibitor and thus promote corrosion.

## DRAINING AND FLUSHING

Every 6 months or 10,000 kilometres, drain and refill the cooling system and add inhibitor. (Refer Page 63.)

To completely drain the cooling system, carry out the following steps:

### RADIATOR

Loosen the cap. Disconnect the lower radiator hose at the rear of the radiator after loosening the hose clamp.

### ENGINE

Unscrew the square head plug at the right rear of the cylinder block, adjacent to the oil pressure sender.

**REMINDER:** Replace and properly tighten all drain points before refilling.

Do not use cleaning chemicals to loosen scale unless the cooling system is afterwards thoroughly reverse flushed, otherwise loosened scale will clog the radiator water passages.

For complete removal of loose sediment and sludge from the radiator and water jacket, pressure flushing with an air and water gun is recommended, and as this method of flushing requires special equipment we suggest you have this work carried out by your GMH Dealer.

**CAUTION: The radiator coolant contains a corrosion inhibitor or an anti-freeze, both of which are toxic. Should an emergency arise where drinking water is required, the radiator coolant must not be consumed under any circumstances. In addition, care should be taken to prevent the fluid coming in contact with clothing or the exterior finish of the vehicle as it could cause a stain. If any fluid is splashed on the finish, flush immediately with clear water.**

## CORROSION INHIBITOR

### HN-1109 (PART No. 2822485)

It is recommended that 120 ml of engine coolant system corrosion inhibitor HN1109 be added after regular draining. This quantity is only applicable when water of a high purity is used.

### MIXING INSTRUCTIONS

The recommended quantity, for the particular engine, should be added to a bucketful of water and stirred before pouring the water into the radiator. Then complete the filling of the cooling system with water. It is not recommended that water be added to a container, into which the inhibitor has first been poured.

### COLOUR INDICATIONS

Initially, the inhibitor will cause a pale transparent green coloration to the water. After some time the coloration may change to greenish-yellow. In either case, these colours indicate that the cooling system is being protected by the inhibitor.

### NEW RADIATOR PROCEDURE

Where a new radiator is fitted, use inhibitor HN-1109 and drain after the first 6 months or 10,000 kilometres.

## USE OF ANTI-FREEZE FLUID

The recommended anti-freeze fluid is permanent type (ethylene glycol) GM 1899M, which can be obtained through a GMH Dealer who, before adding, should make a thorough check of the cooling system.

**NOTE:** Anti-freeze provides the action of a corrosion inhibitor, eliminating the necessity for a separate additive.

Where a vehicle is to be parked overnight or operated for any length of time in regions where temperatures of 0.°C or below are encountered (e.g.—snow areas), the recommended brand of anti-freeze fluid should be used in the cooling system in accordance with the instructions specified.

### COLD WEATHER DRAINING

If the recommended brand of anti-freeze fluid is not available, the radiator, and cylinder case, MUST be drained before parking to prevent the possible bursting of the radiator, or cracking the cylinder block which can occur if the coolant freezes.

**CAUTION: Draining of the main radiator and cylinder case assembly will not drain the water out of the heater radiator; therefore, the use of Anti-Freeze will eliminate the risk of a damaged heater core.**

# BATTERY (12 VOLT)

The battery is located in a metal cradle mounted on the left hand fender skirt in the engine compartment and the negative (—) terminal is "grounded". Never disconnect the battery or generator when the engine is running. Always connect Positive (+) to Positive (+), Negative (—) to Negative (—) whenever a battery charger is used.

## FLUID LEVEL

The battery fluid level should be maintained at 1 cm above the plates by adding distilled water. Distilled water will be required more frequently in summer than in winter. It is a good plan to check the fluid level at least once a week in summer and every two weeks in winter. When long daylight runs are made, water must be added still more frequently.

## MAINTENANCE

To keep the battery clean and free from corrosion regularly wash with a solution of ammonia or baking soda and water. Thoroughly rinse with clean water and dry. After drying an application of petroleum jelly around the battery posts and cable terminals will help reduce the corrosive build up. Do not hammer or otherwise drive a terminal onto its post.

**CAUTION: Never expose a battery to open flame or electric spark — battery action generates hydrogen gas which is flammable and explosive. Don't allow battery fluid to contact skin, eyes, fabrics, or painted surfaces — battery fluid is a sulphuric acid solution which could cause serious personal injury or property damage. Flush any contacted area immediately with water. Wear eye protection such as industrial safety spectacles or goggles when working on or near a battery. Remove rings, metal watchbands and other metal jewellery before jump starting or working around a battery, and be careful in using metal tools — if such metal should contact the positive battery terminal (or metal in contact with it) and any other metal on the vehicle, a short circuit may occur which could cause personal injury. Batteries and battery acid should always be kept out of the reach of children.**



# BRAKE MASTER CYLINDER

Every 6 months or 10,000 kilometres check the fluid level in the master cylinder. The fluid level should be maintained at 3 mm below the wall top edge. If the master cylinder requires constant topping up it could indicate that a malfunction exists in which case it should be immediately brought to the attention of your servicing GMH Dealer.

# AIR CLEANER

The air cleaner should be removed and cleaned every 6 months or 10,000 km and replaced every 24 months or 40,000 km. If the vehicle is operating in extremely dusty conditions for any length of time the air cleaner should be cleaned more frequently.

**CAUTION: Do not remove the engine air cleaner unless temporary removal is necessary during repair or maintenance of the vehicle. When the air cleaner is removed backfiring can cause fire in the engine compartment.**

## CRANKCASE VENTILATION FILTER

Every 12 months or 20,000 kilometres clean the crankcase ventilation intake filter, located in the rocker cover, with kerosene or a suitable solvent. Dry with compressed air.

# EVAPORATIVE CONTROL SYSTEM

Every 24 months or 40,000 kilometres check all fuel and vapour lines, hoses and associated parts for proper connections and correct routing as well as condition. Remove the cannister and check for cracks or damage. Replace damaged or deteriorated parts as necessary. Replace the filter in the lower section of the cannister.

# WINDSHIELD NOTES

## WINDSHIELD CLEANLINESS

It is imperative, at all times, that the windshield surface be maintained In a clean condition so that the wiper blades may be as effective as possible in wiping clean the surface. Use of the windshield washer and Optikleen washer solvent will assist in removing dirt and dust particularly when drlving at a time when no raln is falling; however, every opportunity should be taken to wipe or wash the windshield by hand (most Service Stations have such a servlce today as a courtesy item). Abrasive materials must never be used to remove a build-up of road scum, etc., as a scratched windshield will cause difficulty in achieving proper vlsion, particularly In night driving. Therefore, after the windshield has been cleaned with a wet sponge etc., it should be wiped dry with a soft, llnt free cloth or even a ball of newspaper.

## WINDSHIELD WIPER BLADES — CLEANING

Much of the olly road scum thrown up onto the windshield glass, causing smearing when the wiper is switched on, transfers onto the wiper blade. Many owners, whilst they methodically clean the windshield glass, omit to clean the wiper blades and consequently smearlng of the glass reappears immediately the wiper blades are set In motion. The blades can be cleaned by simply lifting them off the windshield glass and then using warm water and a recognised washing fluid. If so desired, the wiper blade can be removed from the arm for cleaning purposes by simply disengaging it from the arm In accordance with the following instructions:—

1. Lift the wiper arm and blade off the wlndshleld glass with one hand.
2. While holding the wlper arm in one hand relieve the pressure on the retaining clip, located at the centre of the blade. This will enable you to remove the blade from the arm.
3. To replace the blade reverse the above procedure ensuring that the retaining clip snaps home.

## WINDSHIELD WASHER RESERVOIR

A plastic reservoir containing liquid for the windshield washer is mounted in the engine compartment. It is suggested that when checking the radlator coolant level, the washer reservoir be checked also. For a crystal clear view Optikleen Washer Solvent (Part Number M37068) can be used by adding from the graduated container, the recommended proportlon.

**CAUTION: Do not operate the wiper blades by hand as this may damage the wiper drive mechanism.**

**In dry conditions, if the wiper blades are used to clean dust and dirt from the windshield always use the washer system to wet the windshield. Ensure that the windshield washer reservoir is checked regularly all the year round.**

**Should the wiper blades be frozen to the windshield, it is imperative that they be lifted off and freed by hand before switching on the windshield wiper system.**

# LUBRICANTS

## CHASSIS

**ENGINE OIL**
(Refer Page 59 for grades and application.)

**MANUAL TRANSMISSION OIL**
Multigrade to HN 1046 specification 80-90 viscosity rating.

**AUTOMATIC TRANSMISSION FLUID**
*DEXRON automatic transmission fluid only should be used for topping up or service refills.
*DEXRON is a registered trademark of General Motors Corporation.

**REAR AXLE OIL**
Use Multipurpose Hypoid gear oil in this order of preference, HN 1386 or HN 1187 or HN 1181 specification.

**FRONT SUSPENSION AND STEERING BALL JOINTS**
E.P. Type Lithium grease to GM 9985038 Specification wherever possible. Otherwise always ensure that a high quality grease of suitable type is used.

**FRONT WHEEL BEARINGS**
Disc Brakes — Grease to HN 1227 specification.

**BRAKE FLUID**
Fluid to GM 4653M Type 450 specification.

**CONTROL SYSTEMS**
Brake and Clutch Pedal Pivots, Clutch Linkage, Transmission Control Linkage, Accelerator Pivots, Parking Brake System, Pivot and Guides.
Grease to HN 1225 (LG-2) specification.

## BODY

Normal use of a vehicle causes metal-to-metal movement at certain points in the body. Noise, wear and improper operation at these points will result when a protective film of lubricant is not provided. Servicing and lubrication of the undermentioned points should be an integral part of the lubrication service and should be checked out as required every 6 months or 10,000 kilometres.

**POWDERED GRAPHITE**
(Apply through key aperture) Door Lock Cylinder
Instrument Panel Compartment Lock Cylinder
Rear Compartment Lid Lock Cylinder

**NON-STAINING GREASE OR ZINC OXIDE GREASE**
(Use sparingly on parts likely to be contacted by clothing)
Engine Hood Catch and Lock
Rear Compartment Hinges
Engine Hood and Door Hinges

**SOLIDOIL**
(Use sparingly on working surfaces)
Door Lock Fork
Door Lock Striker Bolt

**IMPORTANT:** Remove all lubricants that may have dropped or spread onto the external paint finish.

# TYRES

## TYRE PLACARD

Each vehicle has an appropriately designed placard adhered to the inside surface of the instrument panel compartment lid. By taking note of the tyre size fitted to the vehicle, the correct inflation pressure for a particular load application can be selected.

**At no time should the tyre placard be removed — it is placed there as part of the Australian Design Rule requirements.**

### NOTE

The tyre placard lists tyre and rim combinations that are approved for fitment to the vehicle. However, for any particular tyre size designation, tyres with a higher speed rating, (refer note on tyre speed rating, page 70) and/or with a maximum load rating in excess of that listed on the placard are also acceptable, provided they are fitted to the nominated rim size. For example: —

| TYRE SIZE DESIGNATION | | MAXIMUM LOAD RATING | |
|---|---|---|---|
| Listed | Others Acceptable | Listed | Others Acceptable |
| AR 78S13 | — | 481 Kg | Greater than 481 Kg |
| | BR 78S13<br>BR 70H13 | 522 Kg | Greater than 522 Kg |

## TYRE SIZES

Some sizes listed may not be available as Regular Production Options. However, they may be fitted as replacements in an approved manner, provided the rim size specification is suitable as shown on the Tyre Placard.

## TYRE CARE

Tyres should be checked regularly for proper inflation pressure, wear, and damage. The following information will assist you in properly caring for your tyres.

OVER INFLATION
Hard Ride, Poor Traction, Fabric Breaks

UNDER INFLATION
Runs Hot, Loosens Cords, Blowouts, Uneven Wear

PROPER INFLATION
Good Ride, Good Traction, Good Wear

## TYRE PRESSURE RECOMMENDATIONS

1. Tyre pressures should be checked when the tyres are cold, i.e. when the vehicle has been inoperative for 3 hours or more, or driven less than 2 kilometres.

2. Tyre inflation pressure may increase as much as 40 kPa when hot, i.e. after the vehicle has been driven 15 kilometres or at speeds of more than 95 km/h. Do not bleed or reduce pressures to compensate for this build up.

3. For continuous high speed operation, over 120 km/h, increase tyre inflation pressure 30 kPa above the recommended pressures up to a maximum as shown in the Tyre Placard. Sustained speeds above 120 km/h are not recommended when a pressure adjustment would require pressures greater than the maximum pressures.

4. Always use a tyre pressure gauge when checking pressures as the appearance of a tyre can be deceiving, depending on vehicle loading.

## RECOMMENDATIONS ON TYRE ROTATION

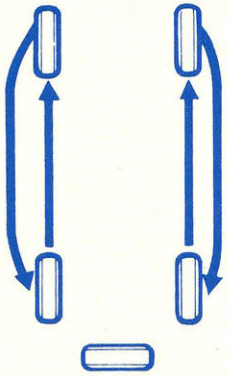
Front and rear tyres perform different functions on a vehicle (steering versus propelling the vehicle). Due to their function, front tyres normally experience shoulder wear whilst rear tyres are more prone to crown wear. Tyre rotation may be used to equalize wear between front and rear tyres. (Refer diagram below.)

Tyres should be inspected at the 5000 kilometre inspection and adjustment and then at 10,000 kilometre intervals. If no abnormal or uneven wear is detected, and you have not experienced any vibration problems, the tyres need not be rotated or balanced.

**NOTE:** Tyres should be rotated prior to regular inspections, if irregular wear develops, ensuring that the reason for the problem is corrected simultaneously.

After rotation, tyre pressures should be adjusted in accordance with the recommendations on the tyre placard.

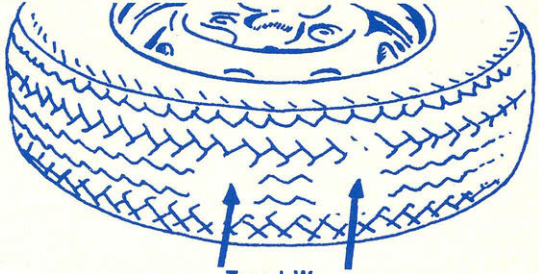
RADIAL TYRES



## TYRE WEAR

Uneven or abnormal tyre wear is usually the result of incorrect inflation pressure, improper wheel alignment, wheels being out-of-balance, or poor driving habits. Under-inflation, incorrect toe-in or camber and fast cornering produce different types of abnormal wear which can be diagnosed by any GMH Dealer. The original equipment tyres incorporate built-in tread wear bars which act as indicators to assist in determining when the tyres have worn to the point of needing immediate replacement.

**CAUTION: When the wear bars appear, tyre replacement should not be delayed, in the interests of safety.**



**Tread Wear Indicators**

## WHEEL BALANCE

Precise wheel and tyre balance is essential if smooth high-speed running and long tyre life are to be obtained, it is advisable to have the wheels and tyres statically and dynamically balanced by a GMH Dealer after every tyre replacement or as required.

## VALVE EXTENSIONS

Valve extensions are fitted to the tyre valve of each wheel. Air will be passed straight through from a pressure connection which can fit over the top of the stem. Also this item removes the need for a valve cap.

## TYRE DAMAGE AND REPAIR

Tyres with cuts, splits or cracks deep enough to expose the fabric, should be replaced. Bulges also indicate internal damage, and these tyres should also be replaced. Tyres with doubtful damage should be removed from the wheel and examined by a competent person.

If a pressure loss occurs while driving, do not attempt to drive on the deflated tyre more than is necessary to stop safely. Driving even a short distance on a deflated tyre can damage it beyond repair.

When puncturing objects are removed, repairs will have to be made according to the recommendations of the tyre manufacturer.

It should always be remembered that a tyre which has been repaired, may not be able to be operated safely at the rated maximum speed and due care should be taken.

**NOTE:** The installation of an Inner tube in a repaired tubeless tyre, is recommended.

## REPLACEMENT TYRES

When replacing tyres only the size, load range and construction type recommended on the Tyre Placard should be fitted. Use of any other tyre or tyre type may seriously affect ride, handling, speedometer/odometer calibration, vehicle ground clearance and tyre clearance to the body and chassis. The following should also be considered when replacing tyres.

1. To achieve best all round vehicle performance, bias-belted tyres and bias tyres should not be mixed on the same vehicle.
2. Because of possible adverse effects on vehicle handling, do not mix radial ply tyres with other types of tyres.
3. It is recommended that new tyres be installed in pairs and be fitted to the front.
4. When replacing only one tyre, it should be paired with the tyre having the least wear, to equalize braking traction.
5. When replacing original tyres with another size which have a different outside diameter, the speedometer and driven gear is used. Check with a GMH Dealer.

## REPLACEMENT WHEELS

When replacing wheels for any reason, care should be taken to ensure that the wheels are equivalent to those removed in diameter, rim width and offset.

## TYRE TRACTION

**CAUTION: A decrease in driving, cornering, and braking traction occurs when water, snow, ice, gravel, or other similar materials are on the road surface. Driving practices and vehicle speed should be adjusted to the road conditions.**

When driving on wet or slushy roads, it is possible for a wedge of water to build up between the tyre and road surface. This phenomenon, known as hydro-planing, may cause partial or complete loss of traction, which adversely affects vehicle control and stopping ability. To reduce the possibility of traction loss, the following precautions should be observed:

1. Reduce speed levels during rainstorms or when roads are slushy and if the road has standing water or puddles.
2. Replace tyres when tread wear indicators are visible.
3. Check that tyres are properly inflated for speed range and vehicle loading.

## TYRES AND FAST MOTORING

For high speed or improved performance and handling, tyre pressures may be increased at the expense of riding comfort.

With this in mind, we consider it advisable to offer some comments concerning the operation of tyres at high speeds as the maximum permissible speed for a tyre cannot be defined without qualification. For example, the prevailing air temperature, the type of road surface, the inflation pressure, and in particular, whether the vehicle is going to be driven at high speeds for long periods, or whether high speeds will be only for short intervals, are some of the things which must be taken into consideration.

However, it should be noted that all the maximum speed recommendations require the following of the tyres:

1. Good condition, the walls and treads being free of cuts and abrasions.

2. Treads are not excessively worn, tread pattern still being visible over the entire tread surface.

3. The tyres are not retreaded or regrooved.

4. Pressure increases as shown on the Tyre Placard for loading and speed operation.

The Tyre Speed Rating is indicated in the designation of tyre by a letter—

**ON RADIAL PLY TYRES:—**

— indicates a speed rating of 170 km/h
**S** indicates a speed rating of 180 km/h
**H** indicates a speed rating of 210 km/h
Examples: 175-R13 : 175SR13 : 175HR13

## RADIAL PLY TYRES

Tyres so constructed have "Radial" marked on the tyre. Because of the stiffening belt under the tread, the ride characteristics of Radial Ply Tyres may be somewhat different from that experienced with conventional tyres. The under-inflated appearance of the radial tyre is normal. Follow the inflation pressure recommended on the Tyre Placard. To achieve the best all-round vehicle performance radial ply tyres should be used at all four wheel positions; that is, radial ply tyres and conventional tyres should not be mixed. When radial ply tyres are fitted, the toe-in setting at the front wheels should be zero if practical, but, the overall setting must be within the normal recommended limits.

**IMPORTANT:** In very rough country, radial ply tyres should be operated at maximum pressures in order to minimise the possibility of damage to the sidewalls.

## HEAVY TREADS

Caution must be exercised when using tyres with heavy treads, including tyres designed to gain traction in bad weather conditions. At sustained high speeds, this type of tyre will run at higher temperatures than standard tyres and consequently should only be operated within the limits recommended by the manufacturer.

Any doubts concerning the fitness of the tyres on your vehicle for the purpose you require should be referred to your GMH Dealer, who will be pleased to advise.

# VEHICLE LOADING INFORMATION

## OVERLOADING

The components of your vehicle are designed to provide satisfactory service if the vehicle is not loaded in excess of the weight specified.

Overloading can create serious potential safety hazards and can also shorten the service life of your vehicle. Your GMH dealer can advise you concerning the proper loading conditions.

### TYRE MAXIMUM LOAD RATING AND MAXIMUM VEHICLE LOADING

Kerb weight is the weight of an unloaded vehicle which includes the weight of all coolants and lubricants together with a full tank of fuel.

It must be understood that the maximum load rating shown on the tyre placard is not an actual load capacity that can be used for each wheel.

While the tyre manufacturers rate the tyre for this load application at the maximum pressure shown on the placard, the vehicle manufacturer's suspension, ride and handling characteristics must be taken into account.

**NOTE:** The maximum rear axle loading and the maximum loaded vehicle weight are not to be exceeded.

### TOW BAR LOADS

Except where a vehicle is fitted with an equalising load trailer hitch and extra heavy duty equipment as required by GMH, the load imposed on the tow bar ball must be included in the maximum rear axle loading and the maximum loaded vehicle weight. (Refer also to page 15.)

## VEHICLE WEIGHT CHART

| MODEL | KERB WEIGHT | MAXIMUM REAR AXLE LOADING | MAXIMUM LOADED VEHICLE WEIGHT |
|---|---|---|---|
| 4 Door Sedan | 1140 kg | 871 kg | 1597 kg |
| 2 Door Hatchback | 1153 kg | 880 kg | 1604 kg |

# BULB REPLACEMENT

**CAUTION: It is the owner's responsibility to check all lamps, signalling systems and warning lights frequently to be sure they are working properly. Headlamp aim should be checked periodically.**

**It is important that any malfunctions be corrected promptly for your safety, and for the safety of others.**

## HEADLAMPS

Replacement of these units is recommended only by a GMH Dealer or a competent person, as the alm should be re-checked after replacements in case the setting has been disturbed.

## FRONT PARKING LAMPS

These are mounted in a twist type socket located in the headlamp socket at the back of the headlamp. Removal of the bulb is by pulling it straight out from its socket.

## FRONT TURN SIGNAL LAMPS

Remove the two cross head screws and then lift out the lens. It is then possible to extract the bayonet type bulb from the socket and replace it with the bulb specified. Care should be taken that the lens gasket is not dislodged from its groove In the lamp body during removal.

## REAR LAMPS

Stop/Tail, Turn Signal and Back-up.

Access to the bulbs for these lamps is galned from inside the luggage compartment. Each bulb holder is removed using a twisting motion which unlocks it from the lamp body. The bulb can then be removed. The stop/tail lamp bulb has a bayonet cap wth offset pins to ensure correct positioning of the filaments. The turn signal/back-up lamp bulb has an ordinary bayonet cap.

## INTERIOR DOME LAMP

To remove gently squeeze together the long sides of the plastic cover to gain access to the bulb. The bulb is of the festoon type.

## INSTRUMENT PANEL AND CONSOLE LAMPS

Replacement of these bulbs is recommended only by a GMH Dealer or a competent person as all the instrument wiring and assocated attachments are prone to damage if not serviced correctly.

## LUGGAGE COMPARTMENT LAMP

**(Where Fitted)**

The bulb is mounted in a socket which is located at the top right hand side of the luggage compartment, adjacent to the steel cargo barrier.

The bulb, which is a normal bayonet type can be removed by using a twisting motion to disengage the lugs and then pulling it straight out of its socket.

# FUEL ECONOMY

## HOW TO IMPROVE IT

How you drive, where you drive, and when you drive; all have an effect on the distance that can be travelled using a given quantity of fuel. The attention you give your vehicle as far as maintenance and repairs are concerned, will also contribute to fuel economy.

**FUEL SELECTION:**
(Refer to page 56.)

**HARD ACCELERATION:**
Fuel can be conserved and engine and tyre life prolonged by avoiding unnecessarily hard acceleration.

**STOP-AND-START DRIVING:**
Frequent stops and starts during a trip really cuts down on your fuel economy. Plan your short trips to take advantage of through streets. Also, pace your driving to avoid unnecessary stops by observing traffic flow and traffic light-co-ordination on the regular routes you use.

**SPEED VERSUS CONSUMPTION:**
Excessive speed on the highway raises your fuel consumption. Statistics show that you might save up to 20% on your fuel costs by driving at 80 km/h instead of 110 km/h.

**ENGINE IDLING:**
An idling engine uses fuel. If you have to wait for more than a few minutes, turning off the engine will conserve fuel.

**HARD DRIVING IN BUILT UP AREAS:**
Energy is wasted as heat when braking. Hard driving up to stopping points is wasting fuel, as energy in the form of fuel is also needed to accelerate again. This situation can often be avoided.

**AIR CLEANER ELEMENT:**
Your vehicle receives its power from a mixture of fuel and air, so it's important to replace the air cleaner element at the required intervals. A dirty air cleaner element reduces engine efficiency.

**ENGINE TUNE:**
Overall tuning (a check on timing, distributor points, spark plugs and emission control systems) can improve your vehicle's fuel economy. An "out-of-tune" engine cannot give good fuel economy.

**EXCESS WEIGHT:**
Fuel economy is related to the work the engine must do. The heavier the load, the more power it takes. Keep excess weight to a minimum.

**TYRE INFLATION:**
Under inflation not only causes needless wear of the tyres, but can also waste fuel. It's a good idea to check tyre pressures every week, or as needed, for the loads carried.

**WHEEL ALIGNMENT:**
Incorrect alignment has the effect of dragging the front tyres and causes premature tyre wear. It takes power to work against this extra load which consumes fuel.

# SECTION – 6 SPECIFICATIONS

## SERIAL NUMBERS

### V.I.N. PLATE
**(VEHICLE IDENTIFICATION NO.)**

Attached to the top shroud ledge of the dash panel on the right (Driver's) side under the engine hood.

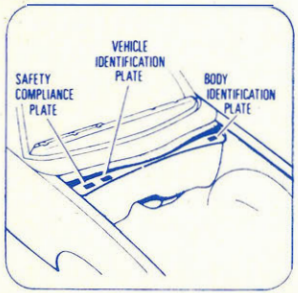
### VEHICLE SERIAL No.
**(CHASSIS NO.)**

Stamped on a paint-free zone on the top face of the right hand frame member at the front end — access under the engine hood.

### BODY SERIAL NUMBER PLATE

Attached to the top ledge of the dash panel on the left (Passenger's) side under the engine hood. Plate shows body styles, body serial number, paint and trim colour combination, paint number, Engine, Transmission and Axle Ratio Options.

### SAFETY COMPLIANCE PLATE
**(NOT APPLICABLE TO EXPORT)**




Attached to the top ledge of the dash panel on the right (Driver's) side under the engine hood. Shows vehicle Series, Model, Style, Month and Year of production, Vehicle Serial Number, approved seating capacity, and the Australian Design Rules to which the vehicle complies.

**Illustrated are the postions of three plates fitted for identification purpose.**

## ENGINE NUMBER PREFIXES

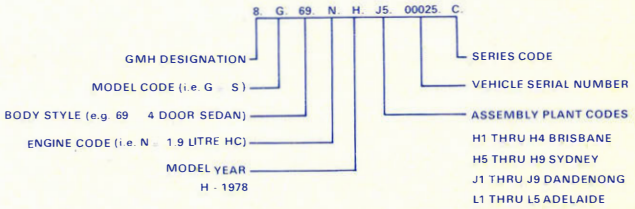
UN — 1.9 Litre HC
UA — 1.9 Litre LC (Export and fleet orders only)
Stamped on a pad on the right hand side of the engine above the mounting bosses.

## MODEL RANGE & NUMBER

| Model | Model Identification | V.I.N. Code |
|---|---|---|
| Sunbird Sedan | 8UH69 | 8H69 |
| Sunbird SL Sedan | 8UH69 & V5V | 8H69 |
| Sunbird SLE Sedan | 8UH69 & A8J | 8H69 |
| Sunbird Hatchback | 8UH77 | 8H77 |
| Sunbird SL Hatchback | 8UH77 & V5V | 8H77 |
| Sunbird SLE Hatchback | 8UH77 & A8J | 8H77 |

## *VEHICLE IDENTIFICATION NUMBER (V.I.N.)

*The table below gives a break down of the V.I.N. and the meaning of each section.


8 G 69 N H J5 00025 C
GMH DESIGNATION
MODEL CODE (i.e. G S)
BODY STYLE (e.g. 69 4 DOOR SEDAN)
ENGINE CODE (i.e. N 1.9 LITRE HC)
MODEL YEAR
H - 1978
SERIES CODE
VEHICLE SERIAL NUMBER
ASSEMBLY PLANT CODES
H1 THRU H4 BRISBANE
H5 THRU H9 SYDNEY
J1 THRU J9 DANDENONG
L1 THRU L5 ADELAIDE

# VEHICLE DIMENSIONS

| | Millimetres |
|---|---|
| **OVERALL LENGTH** | 4499 |
| **OVERALL WIDTH** | 1704 |
| ***OVERALL HEIGHT**<br>— Sedan<br>— Hatchback | <br>1340<br>1331 |
| **WHEELBASE** | 2586 |
| **TRACK**<br>— Front<br>— Rear | <br>1415<br>1382 |
| ***GROUND CLEARANCE**<br>(Minimum at Frame)<br>— Sedan<br>— Hatchback | <br><br>135<br>134 |

*@ Design Load

# ENGINE DATA

| **ENGINE DESIGNATION*** ▶ | 1.9 Litre HC |
|---|---|
| Piston Displacement (Cu. Cms.) | 1892 |
| Comp. Ratio: 1 (Max.) | 8.7 |
| Petrol Research Octane Rating | 94 |
| Number Cylinders | FOUR |
| Bore/Stroke mm | 88.9 x 76.2 |
| Taxable H.P. RAC or SAE | 19.6 |
| Power (Din) Kw @ R.P.M. | 59 @ 4800 |
| Torque (Din) Nm @ R.P.M. | 139 @ 2600 |
| Cylinder Numbering (Front to Rear) | 1 2 3 4 |
| Firing Order | 1 3 4 2 |

# CAPACITIES

Litres

## ENGINE OIL

| | |
|---|---|
| Service Refill | 3.2 |
| Add for Filter | 0.8 |

## MANUAL TRANSMISSION OIL .. .. .. 1.8

## AUTOMATIC TRANSMISSION FLUID

| | |
|---|---|
| Service Refill — Approximate | 2.3 |
| Dry (as at overhaul) | 5.4 |

## REAR AXLE OIL .. .. .. .. .. .. 1.4

## COOLING SYSTEM FLUID .. .. .. .. 8.5

Pressure Rating of Radiator Cap — 100 kPa

## FUEL TANK — 55 litres

**NOTE:** Use fluid level for final check.

# CARBURETTOR

## MIXTURE

The mixture control of the carburettor has been sealed and the idling speed set to comply with the Australian Design Rules. The reason for this is to conform to anti-pollution measures.

**Your GMH Dealer has the full information concerning the foregoing.**

# CLEARANCES AND SETTINGS

| ENGINE TYPE ▶ | 4 CYLINDER |
|---|---|
| DISTRIBUTOR<br>— Point Opening (approx.)<br>— Cam Angle Dwell | <br>.46 mm<br>48°—52° |
| SPARK PLUG GAP | 1 mm |
| Valve Clearance | Zero<br>(Non Adjustable) |

## WHEEL NUT TORQUES

Recommended Wheel Nut Torque is 75-80 Nm.

# FUSE SYSTEM

## FUSES

The fuse block is located behind a flush fitting plastic cover at the lower right hand corner of the instrument panel, adjacent to the hood release. To gain access to the fuses remove the cover by using the recess provided. The fuses can be identified by referring to the fuse layout on the reverse side of the cover.

If after replacing a burnt-out fuse, the new fuse burns out, this indicates that the fuse is still overloaded. The cause of the fault should be located and rectified, preferably by a GMH Dealer.

## FUSIBLE LINK

In order to reduce the possibility of a fire, whether due to electrical causes or an accident, the wiring harness is protected by the inclusion of a fusible link, located in the harness next to the starter motor. In case of a short circuit, the link will melt internally, disconnecting the battery by the fusing action. The encasing insulation has been specially designed to withstand the temperature and to contain the fused wires. Thus the fusible link provides a combined fuse and fire protection feature.

## THERMAL CIRCUIT INTERRUPTOR

The headlamp circuit is protected by a thermal interruptor incorporated in the lighting switch. If the current load is excessive, due to a short circuit for example, contact points in the interruptor open and close rapidly thus making and breaking the circuit, and so reducing the current sufficiently to prevent damage to the wiring. This action continues until the fault is eliminated. During this action of the interruptor there is usually sufficient light maintained to enable the vehicle to be driven to the nearest service station. If the interruptor does come into action the cause should be located and the trouble rectified as soon as possible.

| Fuse Position | Circuit | Fuse No. & Capacity |
|---|---|---|
| 1-2 | Instrument & Control Illumination | 3 Amp |
| 3-4 | Trailer Circuit | 15 Amp |
| 5-6 | Horn, Clock, Power Antenna Relay | 15 Amp |
| 7-8 | Front Park, Tail Licence Plate, Auxiliary Lamps, Glove-box, Dome Lamp Fuse 1-2 | 25 Amp |
| 9-10 | Auxiliary | — |
| 11-12 | Back-up, Anti Dies. Solenoid, Dist. Adv. Solenoid, Instruments, Detent Solenoid | 15 Amp |
| 13-14 | Heater Fan, Wiper Well Control | 15 Amp |
| 15-16 | Turn Signal, Wiper/Washer, Power Antenna | 15 Amp |
| 17-18 | Radio/Stereo | 3 Amp |
| 19-20 | Cigar Lighter without Heated Window<br>Cigar Lighter and Heated Window | 15 Amp<br>25 Amp |
| 21-22 | Headlamp Flash and Stop Lamps | 25 Amp |
| In-line Fuse | Auxiliary Driving Lights, Airconditioning Auxiliary Cooling Fan | 15 Amp |
| Circuit Breaker | Headlamps In Switch<br>Airconditioning Auxiliary Cooling Fan<br>Airconditioning Hi-Blower Speed | — |

# HEADLAMP AND BULB SPECIFICATIONS

| HEADLAMPS | GMH Part Number | Trade Part Number | Power Rating |
|---|---|---|---|
| STANDARD — Sealed Beam | 9945070 | — | 75/60 Watt |
| OPTIONAL — Quartz Halogen Semi Sealed Beam | 9941750 | — | 60/65 Watt |

| BULBS | GMH Part Number | Trade Part Number | Power Rating |
|---|---|---|---|
| Front Park<br>Instrument Illumination<br>Glove-box<br>Central Fascia Illumination<br>Temperature Tell-Tale | 9421330 | 194 | 2 CP |
| Oil Pressure & Generator Tell-Tale<br>Hi-Beam<br>Ash Tray & Cigar Lighter Illumination<br>Brake Warning<br>Park Brake Warning<br>Auto-Transmission Selector (Column) | SP 2103 | | 1.2 CP |
| Front Turn Signal<br>Rear Turn Signal & Back-Up | 9417866 | 1156 | 32 CP |
| Licence Plate | SP 1467 | 989 | 13 CP |
| Dome Lamp | 9414045<br>OR<br>9422525 | 211<br>211/1 | 12 CP |
| Luggage Compartment—Sedan<br>Hatchback | 455490<br>SP 1932 | 1003 | 15 CP<br>5 Watt |
| Stop/Tail | 9417867 | H57 | 4/32 CP |
| Heater & Airconditioning Controls<br>Automatic Transmission Console Selector | 9417863 | 1895 | 2 CP |

N.B. Some of the bulbs listed are subject to model or option selection.

# SECTION – 7 **OWNER RELATIONS**

The satisfaction and goodwill of all owners of General Motors-Holden's products are of primary concern to your Dealer and General Motors-Holden's. Normally, any problems that arise in connection with the sales transaction or the operation of your vehicle will be handled by your Dealer's Sales or Service Departments. It is recognized, however, that despite the best intentions of everyone concerned, misunderstandings may sometimes occur. If you have a problem that has not been handled to your satisfaction through normal channels, we suggest that you take the following steps:—

**Step One** — Discuss your problem with a member of dealership management. Frequently, complaints are the result of a breakdown in communication which should be quickly resolved. If the problem has already been reviewed with the Sales Manager or Service Manager of the Dealership, contact the General Manager, or the Dealer Operator.

**Step Two** — Should it appear that your problem cannot be readily resolved by the dealership without additional assistance, the matter can be brought to the attention of the Zone Owner Relations Manager in your State:

**LETTERS SHOULD BE ADDRESSED TO "The Zone Owner Relations Manager" at one of the following locations.**

When writing, it greatly assists if you provide the following information:—

YOUR NAME, ADDRESS, TELEPHONE NUMBER
*VEHICLE MODEL and V.I.N.
*VEHICLE DELIVERY DATE AND ODOMETER READING
DEALER'S NAME AND LOCATION
NATURE OF PROBLEM

*N.B. THIS INFORMATION IS READILY AVAILABLE FROM YOUR WARRANTY CERTIFICATE.

**QUEENSLAND**
General Motors-Holden's Sales Pty. Ltd.,
Box 728, G.P.O.,
BRISBANE, QLD. 4001.

**NEW SOUTH WALES AND AUSTRALIAN CAPITAL TERRITORY**
General Motors-Holden's Sales Pty. Ltd.,
Box 4239, G.P.O.,
SYDNEY, N.S.W. 2001.

**VICTORIA AND TASMANIA**
General Motors-Holden's Sales Pty. Ltd.,
Box 1273 L, G.P.O.,
MELBOURNE, VIC. 3001

**SOUTH AUSTRALIA AND NORTHERN TERRITORY**
General Motors-Holden's Sales Pty. Ltd.,
Box 96, P.O.,
ELIZABETH, S.A. 5112.

**WESTERN AUSTRALIA**
General Motors-Holden's Sales Pty. Ltd.,
P.O. Box 426,
WEST PERTH, W.A. 6005.

**Step Three** — In the unlikely event that after contacting the Zone Owner Relations Manager you are not satisfied, you have another avenue of approach which is, to write to the **National Owner Relations Manager, General Motors-Holden's Sales Pty. Ltd., P.O. Box 5431 C.C., Melbourne, Victoria 3001.**

However, if you contact the Zone or the National Owner Relations Manager, please bear in mind that ultimately the problem will be resolved in the dealership, utilizing the Dealer's facilities, equipment, and personnel. It is suggested, therefore, that you follow the above steps in sequence when pursuing a problem.

# SECTION — 8 AUTHORISED GMH DEALERS

**EFFECTIVE 27/2/78**

## QUEENSLAND—METROPOLITAN DEALERS

**ASPLEY**
**Zupp (Aspley) Pty. Ltd.,**
1442 Gympie Road

MOOROOKA
**John Sivyer Pty. Ltd.,**
1606 Ipswich Road

MT. GRAVATT
**Zupps Motors Pty. Ltd.,**
1310 Logan Road

NEWSTEAD
**Eagers Retail Pty. Ltd.,**
95 Breakfast Creek Road

**NUNDAH**
**Eagers (Northside),**
Cnr. New Sandgate Road and Wood Street

OXLEY
**Miall-Phillips Holden,**
2193 Ipswich Road

REDCLIFFE
**Kevin Healy Motors,**
425 Elizabeth Avenue

STONES CORNER
**Keith Leach Holden,**
456 Logan Road

**WINDSOR**
**Leach Motors,**
Newmarket Road

WOOLOONGABBA, South Brisbane
**Eagers (Southside),**
Cnr. Logan Road and Trafalgar Street

WYNNUM
**G. & B. Holden,**
200 Tingal Road

VALLEY
**Eagers Retail Pty. Ltd.,**
Ann and Marshall Streets

# AUTHORISED GMH DEALERS

## QUEENSLAND—COUNTRY DEALERS & SERVICE DEALERS

- ALLORA
- ATHERTON
- AYR
- BEAUDESERT
- BEENLEIGH
- BEERWAH
- BILOELA
- BOWEN
- BUNDABERG
- CABOOLTURE
- CAIRNS
- CALOUNDRA
- CHARLEVILLE
- CHARTERS TOWERS
- CHINCHILLA
- CLERMONT
- CLEVELAND
- CLONCURRY
- COOLANGATTA
- CUNNAMULLA
- DALBY
- DIRRANBANDI
- EMERALD
- GATTON
- GAYNDAH
- GLADSTONE
- GOONDIWINDI
- GYMPIE
- HUGHENDEN
- INGHAM
- INNISFAIL
- IPSWICH
- JANDOWAE
- JULIA CREEK
- KILCOY
- KINGAROY
- LAIDLEY
- LONGREACH
- MACKAY
- MAREEBA
- MARYBOROUGH
- MILES
- MITCHELL
- MONTO
- MOURA
- MT ISA
- MURGON
- NAMBOUR
- NANANGO
- PETRIE
- PROSERPINE
- QUILPIE
- ROCKHAMPTON
- ROMA
- SOUTHPORT
- SPRINGSURE
- STANTHORPE
- ST GEORGE
- TARA
- TEXAS
- TOOWOOMBA
- TOWNSVILLE
- TULLY
- WARWICK
- WINTON
- YULEBA

# AUTHORISED GMH DEALERS

## NEW SOUTH WALES—METROPOLITAN DEALERS

ARNCLIFFE
**Suttons Motors (Arncliffe) Pty. Ltd.,**
93 Princes Highway

ASHFIELD
**Muirs Motors (Ashfield) Pty. Ltd.,**
252 Parramatta Road

AUBURN
**Sturgess Holden**
235 Parramatta Road

BALGOWLAH
**Ross Hannon Holden**
164 Condamine Street

BANKSTOWN
**Boyded Bankstown**
236-242 South Terrace

BAULKHAM HILLS
**Tony Packard Holden**
Cnr. Victoria Avenue & Windsor Road

BLACKTOWN
**Mitchell & Townsend,**
125 Main Street

CABRAMATTA
**Ron Hodgson Holden**
266 Hume Highway

CAMPBELLTOWN
**Clintons Motors Pty. Ltd.,**
3-17 Queen Street

CAMPERDOWN
**John A. Gilbert Pty. Ltd.,**
36-38 Parramatta Road

CHATSWOOD
**Sundell Holden**
815-843 Pacific Highway

CHULLORA
**Suttons Motors (Chullora) Pty. Ltd.,**
Cnr. Hume Highway & Waterloo Road

CROW'S NEST
**J. N. Caldwell (Holdings) Pty. Ltd.,**
1 Alexander Street

DEE WHY
**Norman G. Booth (Dee Why) Pty. Ltd.,**
Cnr. May and Mooramba Roads

HOMEBUSH
**Gilbert & Roach Pty. Ltd.,**
187 Parramatta Road

HOMEBUSH
**Suttons Motors (Homebush) Pty. Ltd.,**
112 Parramatta Road

HURSTVILLE
**Nyhus Holden**
412 Forest Road

KINGSFORD
**John Pelligrini Holden**
263-271 Anzac Parade

KINGSWOOD
**Max Wright Motors Pty. Ltd.,**
107-119 Great Western Highway

LAKEMBA
**Nash Holden**
1018 Canterbury Road

LIVERPOOL
**A. C. McGrath & Company,**
Cnr. Castlereagh St. & Hume Highway

LIVERPOOL
**Pat Cullen's Garage,**
324-360 Hume Highway

MIRANDA
**W. H. Lober & Co. Pty. Ltd.,**
1-3 Kiora Road

MOSMAN
**Norman G. Booth Pty. Ltd.,**
501 Military Road

NEWPORT BEACH
**Sundell Motors Pittwater Pty. Ltd.,**
Barrenjoey Road

PADSTOW
**Paul Bagnall Holden**
19 Davies Road

PARRAMATTA
**Fair Deal Car Sales Pty. Ltd.,**
65 Church Street

PARRAMATTA
**Hillsdon's Pty. Ltd.,**
87 Church Street

PENNANT HILLS
**L. W. Vagg & Co. Pty. Ltd.,**
351-355 Pennant Hills Road

PETERSHAM
**Suttons Motors (Petersham) Pty. Ltd.,**
649 Parramatta Road

RANDWICK
**Boyded (Randwick),**
265 Avoca Street

ROCKDALE
**C. V. Holland Pty. Ltd.,**
571 Princes Highway

ROSE BAY
**Vern Potts,**
505-509 Old South Head Road

RYDE
**Muirs Motors (Ryde) Pty. Ltd.,**
603-605 Victoria Road

ST. MARY'S
**Lance Motors Pty. Ltd.,**
412 Western Highway

WAITARA
**John A. Gilbert (Northside) Pty. Ltd.,**
90 Pacific Highway

WINDSOR
**Hawkesbury Valley Motors,**
122 George Street.

# AUTHORISED GMH DEALERS

## NEW SOUTH WALES—COUNTRY DEALERS & SERVICE DEALERS

- ADELONG
- ALBURY
- ARDLETHAN
- ARMIDALE
- BALLINA
- BARADINE
- BARELLAN
- BARHAM
- BARRABA
- BATHURST
- BEGA
- BELLINGEN
- BELMONT
- BLAYNEY
- BOGGABRI
- BOMBALA
- BOURKE
- BOWRAL
- BREWARRINA
- BROKEN HILL
- BULAHDELAH
- CANOWINDRA
- CASINO
- CESSNOCK
- COBAR
- COFF'S HARBOUR
- COLLARENEBRI
- CONDOBOLIN
- COOLAMON
- COOMA
- COONABARABRAN
- COONAMBLE
- COOTAMUNDRA
- COROWA
- COWRA
- CROOKWELL
- CULCAIRN
- DENILIQUIN
- DORRIGO
- DUBBO
- DUNGOG
- FINLEY
- FORBES
- GILGANDRA
- GLEN INNES
- GLOUCESTER
- GOSFORD
- GOULBURN
- GRAFTON
- GRENFELL
- GRIFFITH
- GULARGAMBONE
- GUNDAGAI
- GUNNEDAH
- GUNNING
- GUYRA
- HARDEN
- HAY
- HOLBROOK
- INVERELL
- JERILDERIE
- JUNEE
- KANDOS
- KATOOMBA
- KEMPSEY
- KIAMA
- KURRI KURRI
- KYOGLE
- LAKE CARGELLIGO
- LEETON
- LISMORE
- LITHGOW
- MACKSVILLE
- MAITLAND
- MILTON
- MOLONG
- MOREE
- MORUYA
- MOSS VALE
- MUDGEE
- MULLUMBIMBY
- MUNGINDI
- MURWILLUMBAH
- MUSWELLBROOK
- NARRABRI
- NARRANDERA
- NARROMINE
- NEWCASTLE
- NOWRA
- NYNGAN
- ORANGE
- PARKES
- PEAK HILL
- PICTON
- PORT MACQUARIE
- QUEANBEYAN
- QUIRINDI
- SCONE
- SINGLETON
- SPRINGWOOD
- TAMWORTH
- TAREE
- TEMORA
- TENTERFIELD
- TORONTO
- TOTTENHAM
- TRANGIE
- TULLAMORE
- TUMBARUMBA
- TUMUT
- TWEED HEADS
- WAGGA
- WALCHA
- WALLA WALLA
- WALGETT
- WARIALDA
- WARREN
- WAUCHOPE
- WELLINGTON
- WEST WYALONG
- WINGHAM
- WOLLONGONG
- WYONG
- YASS
- YOUNG

## AUSTRALIAN CAPITAL TERRITORY—DEALERS

- CANBERRA (SUBURBAN LOCATIONS)
  BARTON — BRADDON — FYSHWICK — PHILLIP

# AUTHORISED GMH DEALERS

## VICTORIA—METROPOLITAN DEALERS

BENTLEIGH
**Noel Gould Bentleigh Pty. Ltd.,**
280 Centre Road

BERWICK
**Noel Gould Berwick Pty. Ltd.,**
Princes Highway

BALWYN
**Southern Motors (Box Hill) Pty. Ltd.,**
126 Whitehorse Road

BRAYBROOK
**Kevin Dennis Holden**
272 Ballarat Road

BUNDOORA
**Watson Holden**
413 Grimshaw Street

BURWOOD
**Dustings Pty. Ltd.,**
1200 Toorak Road

CAULFIELD
**Booran Holden**
1049 Glenhuntly Road

CHELSEA
**Ron Morphy Holden**
370 Nepean Highway

CHELTENHAM
**Balmoral Holden**
1190 Nepean Highway

DANDENONG
**Bill Patterson—Cheney Dandenong Pty. Ltd.,**
141 Lonsdale Street

DANDENONG
**Preston Motors (Dandenong) Pty. Ltd.,**
Princes Highway

DONCASTER
**Lance Dixon Holden**
601 Doncaster Road

ELSTERNWICK
**Reg. Hunt Holden**
77 Nepean Highway

ESSENDON
**Preston Motors (Essendon) Pty. Ltd.,**
207-211 Keilor Road

FAWKNER
**M. S. & G. Mantello Holden**
1263 Sydney Road

FERNTREE GULLY
**Neilson Motors Pty. Ltd.,**
980 Burwood Road

FOOTSCRAY
**Preston Motors (Footscray) Pty. Ltd.,**
435 Barkly Street

FRANKSTON
**Bayside Holden**
54 Playne Street

GLEN WAVERLEY
**Geoff Brady Holden**
Springvale Road

HASTINGS
**Dustings of Hastings**
762 Hastings Road

HEIDELBERG WEST
**Northpoint Holden**
66 Bell Street

HOPPERS CROSSING
**Edward John Holden**
Princes Highway

LILYDALE
**Peter Robinson Holden**
Main Street

MORNINGTON
**Barry Sheales Holden**
Main Street

OAKLEIGH
**Garry & Warren Smith Pty. Ltd.,**
1575 Dandenong Road

PRESTON
**Campbell's Motors Pty. Ltd.,**
518 High Street

RICHMOND
**Kellway Egan Holden,**
309-313 Bridge Road

RINGWOOD
**Bill Patterson—Ringwood Holden**
45-57 Maroondah Highway

SOUTH MELBOURNE
**Bill Patterson—Cheney Melbourne Pty. Ltd.,**
16-50 Sturt Street

SOUTH MELBOURNE
**Preston Motors Pty. Ltd.,**
132 Sturt Street

WARRANDYTE
**Getson Holden**
Yarra Street

WERRIBEE
**Edward John Motors Pty. Ltd.,**
169 Wattan Street

WEST MELBOURNE
**Rhodes Motor Co. Pty. Ltd.,**
577 King Street

YARRAVILLE
**W. H. & S. Massey Pty. Ltd.,**
377 Williamstown Road

# AUTHORISED GMH DEALERS

## VICTORIA—COUNTRY DEALERS & SERVICE DEALERS

- ALEXANDRA
- ARARAT
- BACCHUS MARSH
- BAIRNSDALE
- BALLARAT
- BENALLA
- BENDIGO
- BERRIWILLOCK
- BIRCHIP
- BOORT
- CAMPERDOWN
- CASTERTON
- CASTLEMAINE
- CHARLTON
- COBRAM
- COHUNA
- COLAC
- COLERAINE
- CORRYONG
- DAYLESFORD
- DERRINALLUM
- DIMBOOLA
- DONALD
- DROUIN
- ECHUCA
- EUROA
- FOSTER
- GEELONG
- HAMILTON
- HEALESVILLE
- HEATHCOTE
- HOPETOUN
- HORSHAM
- JEPARIT
- KANIVA
- KERANG
- KOOWEERUP
- KORUMBURRA
- KYABRAM
- KYNETON
- LANG LANG
- LEONGATHA
- MAFFRA
- MANSFIELD
- MARYBOROUGH
- MILDURA
- MINYIP
- MOE
- MORTLAKE
- MORWELL
- MURRAYVILLE
- MYRTLEFORD
- NAGAMBIE
- NATHALIA
- NHILL
- NULLAWIL
- NUMURKAH
- NYAH
- ORBOST
- OUYEN
- PORTLAND
- PYRAMID HILL
- QUAMBATOOK
- RAINBOW
- ROCHESTER
- RUTHERGLEN
- SALE
- SEA LAKE
- SEYMOUR
- SHEPPARTON
- ST. ARNAUD
- STAWELL
- SWAN HILL
- TALLANGATTA
- TERANG
- TIMBOON
- TRARALGON
- UNDERBOOL
- WANGARATTA
- WARBURTON
- WARRACKNABEAL
- WARRNAMBOOL
- WODONGA
- WONTHAGGI
- WYCHEPROOF
- YARRAM
- YARRAWONGA

## TASMANIA—METROPOLITAN & COUNTRY DEALERS & SERVICE DEALERS

HOBART
**Nettlefold Car & Truck Pty. Ltd.,**
179 Macquarie Street

HOBART
**Motors Pty. Ltd.,**
179 Macquarie Street

BURNIE
**Motors Pty. Ltd.,**
54 Marine Terrace

DEVONPORT
**Motors Pty. Ltd.,**
24 Best Street

HUONVILLE
**Motors Pty. Ltd.,**
Main Street

KING ISLAND
**King Island Motors,**
Currie

LAUNCESTON
**Motors Pty. Ltd.,**
165 Brisbane Street

LAUNCESTON
**Nettlefold Car & Truck Pty. Ltd.,**
71 Bathurst Street

SMITHTON
**Smithton Motors Pty. Ltd.,**
16 Nelson Street

ULVERSTONE
**Motors Pty. Ltd.,**
99 Reibey Street

# AUTHORISED GMH DEALERS

## SOUTH AUSTRALIA—METROPOLITAN DEALERS

ADELAIDE
**Freeman Motors Limited,**
215 Grenfell Street

ADELAIDE
**United Motors Limited,**
72 Franklin Street

EDWARDSTOWN
**Coventry Motors Pty. Ltd.,**
1023-1029 South Road

ELIZABETH
**Peter Page Holden,**
Elizabeth Way

GAWLER
**John Doran Pty. Ltd.,**
48 Murray Street

GLENELG
**John H. Ellers Pty. Ltd.,**
282 Brighton Road

MALVERN
**Claridge Motors Pty. Ltd.,**
361-367 Unley Road

MORPHETT VALE
**Coleton Motors Pty. Ltd.,**
345 Main Road South

PORT ADELAIDE
**Smith Motor Co. Pty. Ltd.,**
171 Commercial Road

VALLEY VIEW
**Plaza Holden,**
817-839 North East Road

## SOUTH AUSTRALIA—COUNTRY DEALERS & SERVICE DEALERS

- ARDROSSAN
- BALAKLAVA
- BERRI
- BORDERTOWN
- BRINKWORTH
- BURRA
- CLARE
- CLEVE
- CRYSTAL BROOK
- CUMMINS
- EUDUNDA
- GLADSTONE
- JAMESTOWN
- KADINA
- KEITH
- KIMBA
- KINGSCOTE
- KINGSTON
- LAMEROO
- LOXTON
- McLAREN VALE
- MAITLAND
- MALLALA
- MANNUM
- MANOORA
- MENINGIE
- MILLICENT
- MINLATON
- MT. BARKER
- MT. GAMBIER
- MURRAY BRIDGE
- NARACOORTE
- ORROROO
- PETERBOROUGH
- PINNAROO
- PORT AUGUSTA
- PORT LINCOLN
- PORT PIRIE
- QUORN
- RENMARK
- SEDAN
- STRATHALBYN
- STREAKY BAY
- TANUNDA
- VICTOR HARBOR
- WAIKERIE
- WHYALLA
- WUDINNA
- WYNDHAM
- YANKALILLA

## NORTHERN TERRITORY—DEALERS

ALICE SPRINGS
**Kittle Bros. (Alice Springs) Pty. Ltd.,**
Wills Terrace

DARWIN
**Suttons Motors (Darwin) Pty. Ltd.,**
Cnr. Mitchell and Knuckey Streets

# AUTHORISED GMH DEALERS

## WESTERN AUSTRALIA—METROPOLITAN DEALERS

BELMONT
**Major Motors Pty. Ltd.,**
225 Great Eastern Highway

CANNINGTON
**Kevin James Motors Pty. Ltd.,**
1308 Albany Highway

FREMANTLE
**Shack Motors,**
59 Queen Victoria Street

GOSNELLS
**Lance Gibbons Holden,**
2325 Albany Highway

MELVILLE
**Melville Motors Pty. Ltd.,**
532-536 Canning Highway

MIDLAND
**Webster Holden,**
37 Great Northern Highway

MORLEY
**Metro Motors Pty. Ltd.,**
212 Walter Road

NAVAL BASE
**Shack Motors Cockburn Pty. Ltd.,**
Rockingham Road

OSBORNE PARK
**North City Pty. Ltd.,**
Cnr. Scarborough Beach Rd. & Harbourne St.

PERTH
**Attwood's Holden,**
22 Stirling Street

PERTH
**City Motors Pty. Limited,**
505 Newcastle Street

PERTH
**Sydney Atkinson Motors Limited,**
20 Terrace Drive

VICTORIA PARK
**Young's W.A. (1975) Pty. Ltd.,**
529 Albany Highway

## WESTERN AUSTRALIA—COUNTRY DEALERS & SERVICE DEALERS

- ALBANY
- BEVERLEY
- BODDINGTON
- BOYUP BROOK
- BROOKTON
- BROOME
- BRUCE ROCK
- BUNBURY
- BUSSELTON
- CARNAMAH
- CARNARVON
- COLLIE
- CORRIGIN
- CRANBROOK
- DALWALLINU
- DERBY
- ESPERANCE
- GERALDTON
- GNOWANGERUP
- GOOMALLING
- HARVEY
- KALGOORLIE
- KAMBALDA
- KARRATHA
- KATANNING
- KELLERBERRIN
- KULIN
- KUNUNURRA
- MANDURAH
- MANJIMUP
- MERREDIN
- MOORA
- MORAWA
- MT. BARKER
- MULLEWA
- NAREMBEEN
- NARROGIN
- NORTHAM
- PINGELLY
- QUAIRADING
- WAGIN
- WONGAN HILLS
- WYALKATCHEM

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# SECTION – 10 SERVICE STATION INFORMATION

## FUEL FILLER CAP

**NOTE:** If this cap requires a replacement, only a cap with the same features should be used. Failure to use the correct cap can result in a serious malfunction of the fuel system. Correct replacement caps may be obtained from your GMH Dealer.

### LOCATION

The filler cap is located behind the hinged rear number plate. Access is gained by swinging down the number plate as shown in the illustration.

## FUEL REQUIREMENT

The vehicle is designed to operate on a good quality clean fuel.
The major Australian Oil Companies produce their petrol according to the following ratings.
Regular (Std.) Grade: 89 Petrol Research Octane Rating
Premium (Super) Grade: 98 Petrol Research Octane Rating
(Refer to page 75 for the correct octane rating for your vehicle's engine.)

## PETROL FUMES

**CAUTION: Petrol is extremely inflammable and highly explosive under certain conditions. Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refuelling. If petrol fumes are noticed while driving, the cause should be determined and corrected without delay.**

## FILLING THE FUEL TANK

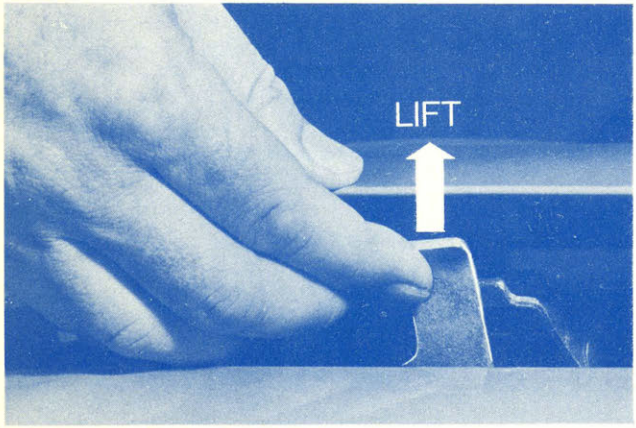
Overfilling of the fuel tank can adversely affect the evaporative Emission Control System.
To avoid this, the following recommendations are made,

1. Fuel tanks should always be filled at the intermediate or fast fill rate. After initial shut-off (or vent blow back) no further fuel should be added. This retains the tank's ability to accommodate fuel expansion.
2. It is permissible to "trickle fill" fuel tanks where vehicles are to be driven for a distance of at least 50 km shortly after the tank is filled.

## ENGINE HOOD LOCK AND CATCH

The hood lock is controlled by a white plastic lever located under the driver's side end of the instrument panel. Pull the lever out to release the lock then push the lever back after the hood has disengaged. The counter-balanced hood can then be opened at the front, by lifting the catch lever located to the right of the centre, when facing the vehicle, under the open end of the hood.

To close, simply lower the hood to a near closed position, then firmly push downwards to fully engage the catch and lock.




## ENGINE OIL DIPSTICK

Check the oil level as the last operation when stopped for fuel. Maintain oil level between the two marks on the dipstick. (Refer to Page 56.)

## RADIATOR COOLANT LEVEL

Maintain at 2-3 cm below the bottom of the filler neck. (Refer to Page 62 for further notes.) This should be done on a weekly basis.

## BATTERY

Check electrolyte fluid level weekly. If the fluid level is low, add distilled water to bring level to approximately 1 cm above the plates. (Refer to Page 64 for additional information.)

## WINDSHIELD WASHER

Check reservoir fluid level weekly. Use a washer fluid additive such as GM Optikleen. (Refer to Page 65 for further notes.)

## TYRE PRESSURES

Check pressures weekly and adjust as needed. Refer to Tyre Placard located on the inside of the instrument panel compartment.

# PREVENTING THE THEFT OF YOUR VEHICLE OR ITS CONTENTS

**Your vehicle is a valuable piece of property which should be carefully guarded. The Police Departments in the respective States are endeavouring to protect your property.**

**Your help is needed, and your attention to the following suggestions is solicited:**

1. **Make sure your ignition key is removed when leaving your vehicle unattended, even in your own garage.**
2. **Close all windows and lock all doors when your vehicle is not in use.**
3. **Do not leave valuables in your vehicle where they will be easily seen and may attract unwarranted attention.**
4. **Never leave valuables or personal belongings in your vehicle overnight.**